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WATER AND RELATED LAND RESOURCES MANAGEMENT STUDY. VOLUME V. SU--ETC(U)

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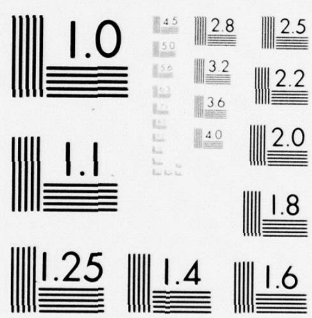
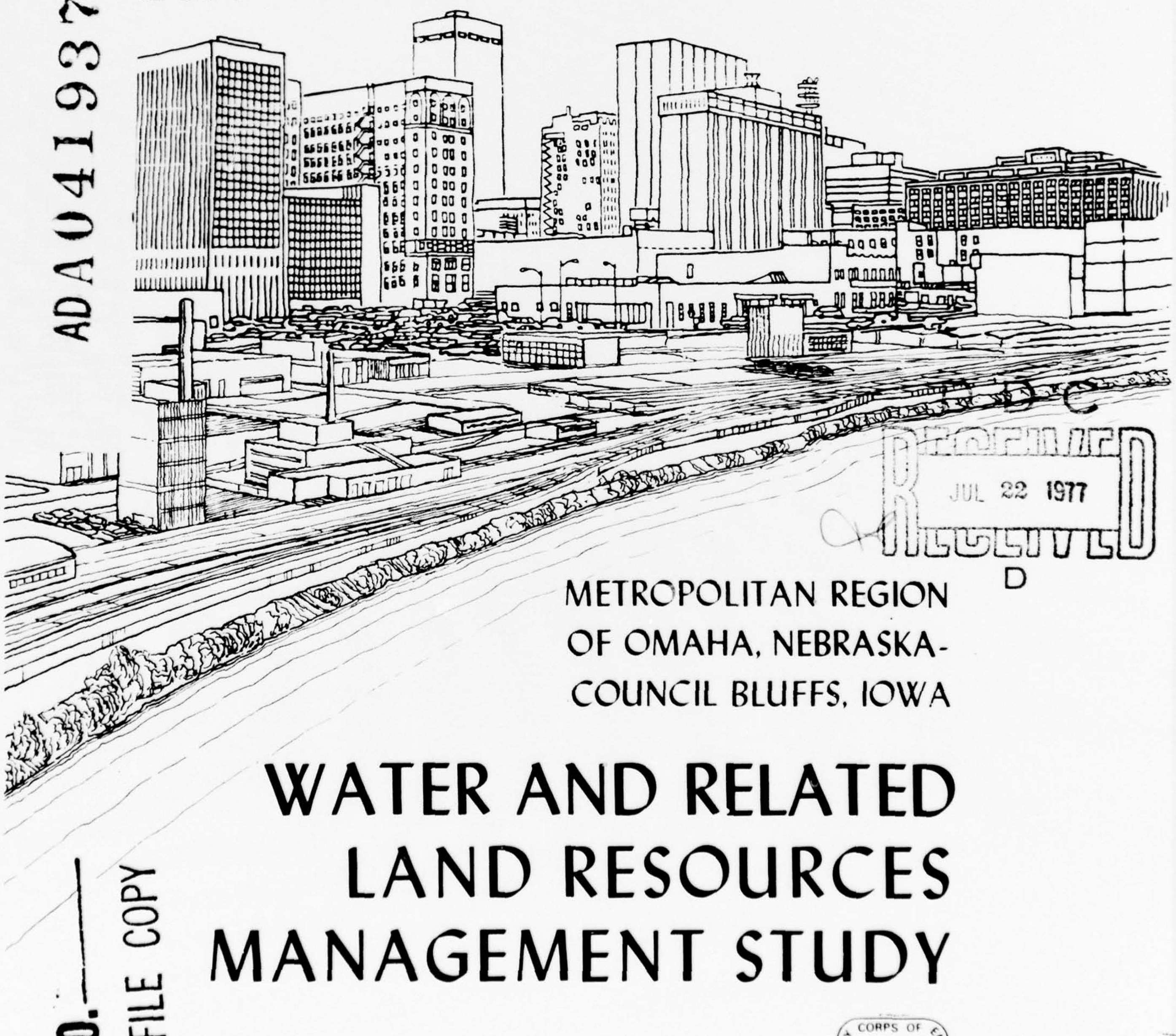


VOLUME V
SUPPORTING TECHNICAL REPORTS APPENDIX

ANNEX K - REGIONAL WATER SUPPLY - APPENDIX

REVIEW REPORT ON THE MISSOURI RIVER AND TRIBUTARIES



METROPOLITAN REGION
OF OMAHA, NEBRASKA-
COUNCIL BLUFFS, IOWA

WATER AND RELATED LAND RESOURCES MANAGEMENT STUDY

JUNE 1975

CORPS OF ENGINEERS · U.S. ARMY · BICENTENNIAL · 1775 · 1975 · 200th

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FINAL REPORT

REGIONAL WATER SUPPLY

APPENDIX

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6 Water and Related Land Resources Management Study. Volume V. Supporting Technical Reports Appendix. Annex K. Regional Water Supply. Appendix.

METROPOLITAN OMAHA, NEBRASKA-COUNCIL BLUFFS, IOWA

MAY, 1975

OMAHA DISTRICT
CORPS OF ENGINEERS

403 710

INTERIM REPORT

REGIONAL WATER SUPPLY

Metropolitan Omaha, Nebraska
Council Bluffs, Iowa

APPENDIX 1 - TECHNICAL REPORT

SECTION A	-	MUNICIPAL WATER SYSTEM INVENTORY
SECTION B	-	MUNICIPAL AND RURAL WATER USAGE SUMMARY
SECTION C	-	POLITICAL AND LEGAL ASPECTS FOR PLANNING AND OPERATING INSTITUTIONS
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SECTION A

MUNICIPAL WATER SYSTEM INVENTORY

MUNICIPAL WATER SYSTEM INVENTORY

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SECTION - A

MUNICIPAL WATER SYSTEM INVENTORY

This Appendix consists of summaries of the municipal water systems in the seven county area. Each summary was compiled from information gathered from several sources including questionnaires, engineering and planning reports, and state agency reports and records.

Information sources common to the Iowa counties of Harrison, Mills, and Pottawattamie include:

Water quality information - Iowa State Department of Environmental Quality, Water Supply Division, Des Moines, Iowa.

Water treatment process and purpose - Census of Public Water Supplies for Iowa Communities, 1972, Iowa State Department of Environmental Quality.

Iowa State Department of Environmental Quality, Water Supply Division Records, Des Moines, Iowa and Regional Office Records, Council Bluffs, Iowa.

Information Sources for individual Iowa counties include:

Harrison - Harrison County, Iowa, Comprehensive County Water and Sewer Plan, 1967, by Harold Hoskins and Associates Inc.

Mills - Mills County, Iowa, Comprehensive Water and Sewer Study, 1970, by Anderson Engineering Co.

Pottawattamie - Pottawattamie County, Iowa, Comprehensive Water and Sewer Plan, 1968, by B.H. Backlund and Associates. Water Facilities Preliminary Plan, 1973, by Omaha-Council Bluffs Metropolitan Area Planning Agency.

Information Sources common to the Nebraska counties of Cass, Douglas, Sarpy, and Washington include:

Water quality information - Chemical Analysis of Nebraska Municipal Water Supplies, 1973, Nebraska State Department of Health, Division of Environmental Engineering.

Water treatment process and chemicals used - Index of Municipal Water Treatment Plants, Nebraska State Department of Health.

Nebraska State Department of Health, Division of Environmental Engineering Records, Lincoln, Nebraska

Information sources used for individual Nebraska Counties include:

Cass - Comprehensive Plan of Cass County, Nebraska, 1968, Clark and Enerson - Olsson, Burroughs and Thomsen, Lincoln, Nebraska.

Nebraska Planning and Development Region 4 Comprehensive Area Wide Water and Sewer Plan, Part I - Background Studies and Plans, 1970, Leo A. Daly Company, Omaha, Nebraska.

Nebraska Planning and Development Region 4 Comprehensive Area Wide Water and Sewer Plan, Part II - Water and Sewer Plans, 1970, Leo A. Daly Company, Omaha, Nebraska.

Douglas - Long Range Comprehensive Water System Master Plan, Metropolitan Utilities District, Omaha, Nebraska, 1972, Henningson, Durham & Richardson.

Preliminary Plans, 1973, Omaha-Council Bluffs Metropolitan Area Planning Agency.

Sarpy - Water Facilities Preliminary Plan, 1973, Omaha-Council Bluffs Metropolitan Area Planning Agency.

Washington - Washington County, Nebraska, Comprehensive Water and Sewer Study, 1968-69, Kirkham, Michael & Associates.

Nebraska Planning and Development Region 5 Comprehensive Area Wide Water and Sewer Plan, Part I - Background Studies and Plans, Wozniak, Richard M.

Nebraska Planning and Development Region 5 Comprehensive Area Wide Water and Sewer Plan, Part II - Water and Sewer Plans, 1971, Wozniak, Richardson M., Powers-Willis & Associates.

All existing populations are 1970 census figures, unless otherwise noted.

Water quality information is taken from records of the Iowa State Department of Environmental Quality, the publication Chemical Analysis of Nebraska Municipal Water Supplies, and information supplied by individual cities. In some instances, different dates for raw and finished water quality analyses may explain apparent discrepancies in treatment effectiveness.

EXISTING FACILITIES SUMMARY

Municipality: Alvo, Nebraska
Type of Water System: Municipal
Water System Governing Body:
Water Supply Source: 1 gravel packed well

Water Supply Source Capacity:

Well	Depth	Capacity
#1	170'	50 gpm

Storage Facilities: 25,000 gallon elevated tank

Treatment Purpose: None

Treatment Processes: None

Chemicals Used in
Treatment Processes: None

Treatment Capacity: None

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	NO_3	Cl	SO_4	Na
Well #1	7.9	370	0.1	0.1	0.41	280	240	75	0.1	8	2	33

The well water exceeds U.S.P.H.S. recommended limits for manganese.

Water Demand:

	Present	1995	2020
Population Served	151	136	124
Average Day Use *-GPD	36,000		
Maximum Day Use-GPD	72,000		
GPCD			

*Average winter use

Industrial Users: None

Commercial Users: Approximately 2% of the total water usage is by commercial customers.

Residential Users: Approximately 98% of the total usage is by residential customers.

Water Rates: *First 2,000 gallons @ $4.00/3 months
Next 2,000 gallons @ $.40/1000 gallons
Over 4,000 gallons @ $.25/1000 gallons
*Based on a quarterly billing period.

Recommendations:

Immediate

1) No immediate needs.

Future

1) Formation of a rural water district which would supply Alvo or construction of additional storage facilities or addition of another well.

Additional Sources of Information:

Questionnaire returned by the City or Town

EXISTING FACILITIES SUMMARY

Municipality: Avoca, Nebraska
Type of Water System: Municipal
Water System Governing Body:
Water Supply Source: 3 wells

Water Supply Source Capacity:

Well	Depth	Capacity
#1	61'	10 gpm
#2	56'	6 gpm
#3	56'	-
	Total =	16 gpm

Storage Facilities:
22,000 gallon ground storage tank.
6,040 gallon elevated tank
28,040 gallons total storage

Treatment Processes: None

Chemicals Used in
Treatment Processes: None

Treatment Capacity: None

Water Quality:

Well	pH	TS	Fe	Mn	F	ALK	Hard	Ca	NO_3	Cl	SO_4	Na
#1	7.2	650	0.8	0.1	.32	284	432	125	16.3	42	25	55
#2	7.2	530	0.1	0.1	.21	292	344	26	14.4	26	4	44
#3	7.5	410	0.1	0.1	.26	272	296	85	5.9	8	2	38

The municipal well water exceeds USPHS recommended limits for manganese & is high in total hardness. Well #1 also exceeds limits for iron and wells #1 and #2 exceed limits for total solids.

Water Demand:	Present	1995	2020
Population Served	229	271	280
Average Day Use - GPD			
Maximum Day Use - GPD			
GPCD			

Industrial Users: None

Commercial Users: NA

Residential Users: NA

Water Rates: NA

Recommended Improvements

Immediate

1) Construction of additional storage facilities, if the rural water district is not constructed.

2) Construction of a water treatment facility to remove excess total solids, if rural water district is not constructed.

Future

1) Expansion of water system to service developing areas of town.

EXISTING FACILITIES SUMMARY

Municipality: Eagle, Nebraska
Type of Water System: Municipal
Water System Governing Body:
Water Supply Source: 2 gravel packed wells

Water Supply Source Capacity:

Well	Depth	Capacity
#1	220'	-
#2	276'	-

Storage Facilities: 30,000 gal. elevated storage tank.

Treatment Purpose: None

Treatment Processes: None

Chemicals Used in Treatment Processes: None

Treatment Capacity: None

Water Quality:

Well #	pH	TS	Fe	Mn	F	ALK	Hard	Ca	N03	Cl	SO_4	Na
1	7.9	420	.8	.3	.50	388	372	106	0.1	22	36	98

Water quality data for Well #2 was not available.
Municipal well waters exceed U.S.P.H.S. recommended limits for iron, and manganese, and is high in total hardness.

Water Demand:

	1973	1995	2020
Population Served	441	778	983
Average Day Use -GPD			
Maximum Day Use -GPD			
GPCD			

Recommended Improvements

Immediate

1) Construction of a water treatment plant

Future

1) Expansion of existing water facilities to meet demands.

EXISTING FACILITIES SUMMARY

Municipality: Elmwood, Nebraska
Type of Water System: Municipal
Water System Governing Body:
Water Supply Source: 3 wells

Water Supply Source Capacity:

Well	Depth	Capacity
53-1	120'	60 gpm
57-1	111'	100 gpm
65-1	77'	120 gpm
		280 gpm

Storage Facilities: 30,000 gallon elevated tank

Treatment Purpose: None

Treatment Processes: None

Chemicals Used in
Treatment Processes: None

Treatment Capacity: None

Water Quality:

Well	pH	TS	Fe	Mn	F	ALK	Hard	Ca	N03	Cl	SO_4	Na
53-1	7.0	430	0.1	0.1	.30	164	244	72	22.4	18	2	35
57-1	7.1	265	0.1	0.1	.28	148	188	58	15.6	28	2	42
65-1	7.3	260	0.1	0.1	.23	152	136	42	9.2	4	2	29

The municipal well water exceeds U.S.P.H.S. recommended limits for manganese.

Water Demand:

	Present	1995	2020
Population Served	548	757	902
Average Day Use - GPD	134,000	-	-
Maximum Day Use -GPD	302,000	-	-
GPCD	227	-	-

Industrial Users: There are no major industrial users.

Commercial Users:	The major commercial users are a laundromat, car wash, nursing home and locker plant. Total consumption by large commercial users is 2,940,000 gallons per year.	
Residential Users:	Approximately 90% of the total water usage is by residential customers.	
Water Rates:	Commercial*	First 4,000 gallons @ $2.00 Over 4,000 gallons @ $.20/1000 gallons
	Residential*	$2.00/Month

*Based on monthly billing period.

Additional Sources of Information:

Questionnaire returned by the City or Town.

EXISTING FACILITIES SUMMARY

Municipality: Greenwood, Nebraska
Type of Water System: Municipal
Water System Governing Body:
Water Supply Source: 2 wells

Water Supply Source Capacity:

Well	Depth	Capacity
#1	106'	100 gpm
#2	108'	350 gpm
	Total	450 gpm

Storage Facilities: 50,000 gallon elevated tank

Treatment Purpose: None

Treatment Processes: None

Chemicals Used in
Treatment Processes: None

Treatment Capacity: None

Water Quality:

	pH	TS	F	Mn	F	ALK	Hard	Ca	NO_3	Cl	SO_4	Na
Well #1	8.4	410	0.0	0.0	.28	276	256	75	1.4	6	14	50
Well #2	8.4	400	0.0	0.0	.32	280	256	77	1.4	8	12	50

The municipal well water meets U.S.P.H.S. recommended limits, but is high in total hardness.

Water Demand:

	Present	1995	2020
Population Served	506	868	1097
Average Day Use -GPD	-	-	-
Maximum Day Use -GPD	-	-	-
GPCD	-	-	-

Industrial Users: None

Commercial Users: NA

Residential Users: Approximately 95% of the total water usage is by residential customers.

Water Rates: $3.00/month residential
$4.00/month rural
$3.00/month commercial

Industrial Users:

Commercial Users:

Residential Users:

Water Rates:

Recommended Improvements

Immediate

1) No immediate needs.

Future

1) Expansion of existing distribution system to accommodate anticipated growth.

Additional Sources of Information

Questionnaire returned by the City or Town

EXISTING FACILITIES SUMMARY

Municipality: Louisville, Nebraska
Type of Water System: Municipal
Water System Governing Body:
Water Supply Source: 2 Wells

Water Supply Source Capacity:

Well	Depth	Capacity
#1	52'	350 GPM
#2	50'	250 GPM
	Total	600 GPM

Storage Facilities: 60,000 gallon standpipe

Treatment Purpose: None

Treatment Processes: None

Chemicals Used in Treatment Processes: None

Treatment Capacity: None

Water Quality:

Well	pH	TS	Fe	Mn	F	ALK	Hard	Ca	N03	Cl	SO_4	Na
#1	7.4	430	.2	.2	.37	288	288	90	0.0	44	14	70
#2	7.5	420	.2	1.1	.46	248	256	72	0.3	74	10	98

The municipal well water exceeds U.S.P.H.S. recommended limits for manganese and is high in total hardness.

Water Demand: --

	Present	1995	2020
Population Served	1036	890	813
Average Day Use -GPD	-	-	-
Maximum Day Use -GPD	-	-	-
GPCD	-	-	-

Industrial Users: None

Commercial Users: NA

Residential Users: NA

Water Rates:*	First	5,000 gallons @	$3.50
	Next	25,000 gallons @	$.29/1000 gallons
	Next	20,000 gallons @	$.24/1000 gallons
	Next	20,000 gallons @	$.21/1000 gallons
	Next	30,000 gallons @	$.17/1000 gallons
	Over	100,000 gallons @	$.12/1000 gallons

*Based on quarterly billing period

Recommended Improvements

Immediate

1) No immediate needs

Future

1) Construction of a 110,000 gallon storage facility.
2) Consideration of possibility of connecting up with a rural water district from the south.

Additional Sources of Information

Questionnaire returned by the City or Town

EXISTING FACILITIES SUMMARY

Municipality: Manley, Nebraska
Type of Water System: Private
Water System Governing Body: None
Water Supply Source: Private Wells

Water Supply Source Capacity: Individual wells are shallow with small capacities.

Storage Facilities: None

Treatment Purpose: None

Treatment Processes: None

Chemicals Used in Treatment Processes: None

Treatment Capacity: None

Water Quality:

pH	TS	Fe	Mn	F	ALK	Hard	Ca	NO_3	Cl	SO_4	Na

Water Demand:

	Present	1995	2020
Population Served	150	265	335
Average Day Use -GPD	-	-	-
Maximum Day Use -GPD	-	-	-
GPCD	-	-	-

Industrial Users: None

Commercial Users: NA

Residential Users: NA

Recommended Improvements:

<u>Immediate:</u>

1. Construction of a distribution system.
2. Construction of a storage facility.
3. Implementation of a rural water district to meet demand.

EXISTING FACILITIES SUMMARY

Municipality: Murdock, Nebraska
Type of Water System: Municipal
Water System Governing Body:
Water Supply Source: 2 wells

Water Supply Source Capacity:

Well	Depth	Capacity
#1	90'	50 gpm
#2	80'	50 gpm
	Total =	100 gpm

Storage Facilities: 20,000 gallon elevated tank

Treatment Purpose: None

Treatment Processes: None

Chemicals Used in Treatment Processes: None

Treatment Capacity: None

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	N03	Cl	SO_4	Na
Well #1	7.6	296	0.1	0.1	0.43	160	156	46	3.8	6	6	41
Well #2	7.9	290	0.8	0.1	0.37	256	152	46	4.2	6	10	40

The municipal well water exceed U.S.P.H.S. recommended limits for manganese. Well #2 also exceeds limits for iron.

Water Demand:

	Present	1995	2020
Population Served	262	314	328
Average Day Use -GPD	-	-	-
Maximum Day Use -GPD	-	-	-
GPCD	-	-	-

Next 2,000 gallons @ \$.40/1000 gallons
Over 4,000 gallons @ \$.25/1000 gallons
*Based on a quarterly billing period.

Industrial Users: None

Commercial Users: NA

Residential Users: NA

Water Rates: NA

Recommended Improvements:
<u>Immediate:</u> Construction of additional storage facilities.
<u>Future:</u> Expansion of the distribution system to the west.

EXISTING FACILITIES SUMMARY

Municipality: Murray, Nebraska
Type of Water System: Municipal
Water System Governing Body:
Water Supply Source: 3 wells

Water Supply Source Capacity:

Well	Depth	Capacity
#1	40'	50 gpm
#2	52'	18 gpm
#3	60'	50 gpm
	Total =	118 gpm

Storage Facilities: 36,000 gallon elevated tank

Treatment Purpose: None

Treatment Processes: None

Chemicals Used in Treatment Processes: None

Treatment Capacity: None

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	N03	Cl	SO_4	Na
Well #1	6.9	455	11.5	0.1	0.41	252	352	95	6.5	18	18	23

The municipal well water exceeds U.S.P.H.S. recommended limits for iron, manganese and is high in total hardness.

Water Demand:

	Present	1995	2020
Population Served	286	327	327
Average Day Use -GPD	-	-	-
Maximum Day Use -GPD	-	-	-
GPCD	-	-	-

Industrial Users: There are no major industrial users.

Commercial Users: NA

Residential Users: NA

Water Rates: NA

Recommended Improvements:

Immediate:

1. Construction of a water treatment plant.
2. Construction of additional storage facilities.

Future:

EXISTING FACILITIES SUMMARY

Municipality: Nehawka, Nebraska
Type of Water System: Municipal
Water System Governing Body:
Water Supply Source: 2 well

Water Supply Source Capacity:

Well	Depth	Capacity
#1	49'	40 gpm
#2		

Storage Facilities: 42,000 gallon concrete surface reservoir

Treatment Purpose: Iron and manganese removal, H_2S control, softening, disinfection

Treatment Processes: (30% of the water will by-pass the softener) aeration, pressure filtration, sedimentation, chlorination.

Chemicals Used in
Treatment Processes: Hypochlorite, NaCl

Treatment Capacity: 35 gpm

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	N03	Cl	$S0_4$	Na
Well #1	7.2	550	9.8	2.2	.28	280	380	115	0.8	68	18	37
Well #2	7.0	520	2.0	1.6	.34	288	380	115	0.0	36	27	30
Finished	7.4	530	0.4	0.4	.27	256	376	110	1.2	68	24	37

The finished water exceeds U.S.P.H.S. recommended limits for total solids, iron and manganese, and is high in total hardness.

Water Demand:

	Present	1995	2020
Population Served	298	389	444
Average Day Use - GPD	-	-	-
Maximum Day Use - GPD	-	-	-
GPCD	-	-	-

Industrial Users: None

Commercial Users: NA

Residential Users: NA

Water Rates: NA

Recommended Improvements:

Immediate:

1. Replacement of existing water treatment plant
2. Construction of additional storage facilities

Future:

1. Expansion of distribution system to the north and east

EXISTING FACILITIES SUMMARY

Municipality: Plattsmouth, Nebraska
Type of Water System: Municipal
Water System Governing Body:
Water Supply Source: 3 gravel packed wells

Water Supply Source Capacity:

Well	Depth	Capacity
#1	80'	480 gpm
#2	88'	525 gpm
#3	80'	600 gpm
	Total =	1605 gpm

Storage Facilities:
1,000,000 gallon elevated tank
290,000 gallon standpipe
1,290,000 gallons total storage

Treatment Purpose: Iron and manganese removal, sulfide removal, softening, hydroge
Treatment Processes: Aeration, disinfection, gravity, filtration, and sedimentation

Chemicals Used in Treatment Processes: Chlorine, potassium permanganate, a chemical polymer (Dow Purifloc N 20), and lime.

Treatment Capacity: 3.0 MGD

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	N03	Cl	SO_4	Na
Well #1	7.5	530	8.3	1.8	.43	420	424	125	0.9	30	20	78
Well #2	7.7	480	9.0	2.2	.35	368	372	109	0.0	24	47	80
Dist. System	7.9	400	0.6	0.0	.30	268	280	67	0.9	26	22	77
Finish. Water	-	190	Nil	Nil	.26	120	124	29	0.2	26	62	42

Water quality data for Well #3 was not available. Finished water quality reported by the City meets USPHS recommended limits.

Water Demand:

	Present	1995	2020
Population Served	6,731	7,684	8,035
Average Day Use - GPD	753,000	-	-
Maximum Day Use - GPD	1,515,000	-	-
GPCD	118	-	-

Industrial Users: None

Commercial Users: The major commercial users are the Public School System (3,803,000 gal/year), a nursing home (4,017,000 gal/year), laundromats (3,580,000 gal/year), and car washes (2,594,000 gal/yr.)

Residential Users: Approximately 85% of the total water usage by residential customers.

Water Rates: *

First 2,000 gallons @ $2.14/month
Next 2,000 gallons @ $ .80/1000 gal.
Next 16,000 gallons @ $. 64/1000 gal.
Over 20,000 gallons @ $ .54/1000 gal.

*Based on monthly billing period

Additional Sources of Information

[1] Questionnaire returned by the City or Town

Harold Hoskins and Associates, Inc., Lincoln, Nebraska. Preliminary Report on Water System Improvements, Plattsmouth, Nebraska April, 1965

EXISTING FACILITIES SUMMARY

Municipality: Union Nebraska
Type of Water System: Municipal
Water System Governing Body:
Water Supply Source: 3 wells

Water Supply Source Capacity:

Well	Depth	Capacity
#1	38'	40 gpm
#2	43'	35 gpm
#3	52'	40 gpm
	Total =	115 gpm

Storage Facilities: 50,000 gallon elevated tank.

Treatment Purpose: None

Treatment Processes: None

Chemicals Used in Treatment Processes: None

Treatment Capacity: None

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	N03	Cl	SO_4	Na
Well #1	7.4	435	0.1	0.1	0.35	256	308	88	10.6	16	6	25
Well #3	7.3	350	0.0	0.0	0.35	212	260	61	7.5	2	10	11

Water quality for well #2 was not available. Well #1 exceeds U.S.P.H.S. recommended limits for manganese. Both Well #1 and #2 are high in total hardness.

Water Demand:

	Present	1995	2020
Population Served	275	244	223
Average Day Use -GPD	-	-	-
Maximum Day Use -GPD	-	-	-
GPCD	-	-	-

Industrial Users: None

Commercial Users: NA

Residential Users: NA

Water Rates: NA

Recommended Improvements:

<u>Immediate:</u>

1. Construction of additional storage facilities.
2. Implementation of rural water district to meet demand.

EXISTING FACILITIES SUMMARY

Municipality: Weeping Water, Nebraska
Type of Water System: Municipal
Water System Governing Body:
Water Supply Source: 2 Wells

Water Supply Source Capacity:

Well	Depth	Capacity
57-1	160'	85 gpm
57-2	165'	85 gpm
	Total	170 gpm

Storage Facilities: 225,000 gallon reservoir

Treatment Purpose: None

Treatment Processes: None

Chemicals Used in
Treatment Processes: None

Treatment Capacity: None

Water Quality:

Well #	pH	TS	Fe	Mn	F	ALK	Hard	Ca	N03	Cl	SO_4	Na
57-1	7.1	220	.1	.1	.30	164	120	37	0.1	2	0.1	27
57-2	7.1	200	.2	.1	.28	160	108	34	0.8	2	0.1	32

The municipal well water exceeds U.S.P.H.S. recommended limits for manganese.

Water Demand:

	Present	1995	2020
Population Served	1175	1374	1446
Average Day Use - GPD	180,560	-	-
Maximum Day Use - GPD	-	-	-
GPCD	154	-	-

Industrial Users: None

Commercial Users: The major commercial users are a laundromat (471,240 gal/year) and a car wash (179,520 gal/year)

Residential Users: Approximately 90% of the total water usage is by residential customers

Water Rates: $.40/100 cubic feet

Additional Sources of Information

Questionnaire returned by the City or Town.

EXISTING FACILITIES SUMMARY

Municipality: Bennington, Nebraska
Type of Water System: Municipal
Water System Governing Body:
Water Supply Source: 4 Gravel Packed Wells

Water Supply Source Capacity:

Well	Depth	Capacity
#1*	-	-
#2	-	80 gpm
#3	225'	100 gpm
#4	215'	100 gpm
	Total =	280 gpm

*Well #1 is used for standby purposes

Storage Facilities:

250,000 gallon elevated tank
30,000 gallon standpipe
280,000 gallons total storage

Treatment: None

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	N03	Cl	SO_4	Na
Well #1	7.3	460	0.9	0.2	0.48	328	316	90	0.1	6	14	47
Well #2	7.1	430	1.2	0.2	0.28	320	320	86	0.1	6	10	32
Well #3			1.6	0.2							10	
Well #4	7.0	380	0.2	0.2	0.34	332	308	86	0.0	0	37	21

The municipal wells exceed U.S.P.H.S. recommended limits for manganese and are high in total hardness. Wells #1 and #2 and #3 also exceed recommended limits for iron.

Water Demand:	1972*	1995*	2000
Population Served	750	4100	
Average Day Use - GPD	95,648	520,700	
Maximum Day Use - GPD	221,175	1,209,500	
GPCD	127	127	

*based on engineering report - 1973

Industrial Users: None

Commercial Users: The largest commercial users are a laundromat (362,900 gal/year) and a locker plant (2,256,000 gal/year).

Residential Users: Approximately 97% of the total water usage is by residential customers.

Water Rates: Residential Rate*
$.75/1000 gallons

Commercial Rates*
First 50,000 gallons at $.75/1000 gallons
Next 50,000 gallons at $.30/1000 gallons
Over 100,000 gallons at $.20/1000 gallons

*Based on a quarterly billing period.

Recommended Water Supply Improvements:

Immediate

1) Addition of one well to meet future maximum day demands.
2) Consideration of water treatment to reduce hardness, and remove iron and manganese.
3) Construction of a 250,000 gallon storage tank.

Future

1) Construction of additional water mains and elimination of dead ends in the distribution system where possible.
2) Installation of fluoridation, chlorination and hexametaphosphate feed equipment at each well, if necessary.
3) Connection of system to M.U.D. in early 1980's.

Additional Source of Information:

Kirkham, Michael & Associates, Municipal Water Supply System for Bennington, Nebraska, 1973

Questionnaire returned by the City or Town.

EXISTING FACILITIES SUMMARY

Municipality: Elkhorn, Nebraska
Type of Water: Municipal
Water System Governing Body:
Water Supply Source: 4 gravel packed wells.

Water Supply Source Capacity:

Well	Depth	Capacity
#73-1	238'	600 gpm
#1	197	550 gpm
#2	183	50 gpm
#3		350 gpm
	Total =	1,550 gpm

Storage Facilities: 33,000 gallon pressure tank
47,000 gallon standpipe
80,000 gallons total storage

Treatment Purpose: None

Treatment Processes: None

Chemicals Used in
Treatment Processes: None

Treatment Capacity: None

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	NO_3	Cl'	SO_4	Na
Well #1	7.0	410	0.6	0.1	.37	296	276	82	0.4	6	19	14
Well #2	8.1	330	0.0	0.0	.33	280	276	75	0.6	4	2	13
Well #3	7.8	410	0.0	0.0	.35	320	304	88	1.4	4	10	14

Water quality data for Well #73-1 was not available. Well #1 exceeds recommended limits for iron and manganese. All the wells are high in total hardness.

Water Demand:

	1972	1975	1995	2020
Population Served	1,400	1,520	2,851	3,819
Average Day Use GPD	155,000	174,800	469,800	-
Maximum Day Use GPD	280,000	-	-	-
GPCD	110	115	135	-

Industrial Users: None

Commercial Users: The major commercial users are a laundromat (560,000 gal/year), a car wash (316,000 gal/yr.), a bowling alley (304,000 gal/year) and a nursing home (2,924,000 gal/year.)

Residential Users:
Approximately 90% of the total water usage by residential customers.

Water Rates:

First	5,000 gal. or less	@	$6.90
Next	20,000 gal	@	$0.75/1000 gal.
Next	25,000 gal	@	$0.50/1000 gal.
Next	25,000 gal.	@	$0.40/1000 gal.
Next	25,000 gal.	@	$0.30/1000 gal.
Over	100,000 gal.	@	$0.20/1000 gal.

Recommended Improvements

Immediate

1) Addition of a standby well for the north system.

Additional Sources of Information:
Questionnaire returned by the City or Town

EXISTING FACILITIES SUMMARY

Municipality: Valley, Nebraska
Type of Water: Municipal
Water System Governing Body:
Water Supply Source: 3 wells

Water Supply Source Capacity:

Well	Depth	Capacity
#1	100'	450 gpm
#2	100'	-
#3	-	-
	Total=	1,800 gpm

Storage Facilities: 25,000 gallon elevated tank

Treatment Purpose: None

Treatment Processes: None

Chemicals Used in
Treatment Processes: None

Treatment Capacity: None

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	NO_3	Cl	SO_4	Na
Well #1	7.3	380	0.0	0.4	0.37	188	224	69	0.0	20	54	34
Well #2	7.2	300	0.0	0.1	0.37	152	180	54	0.0	8	2	23
Well #3	7.8	350	0.0	0.8	0.34	180	220	64	1.0	16	72	22

The municipal wells exceed U.S.P.H.S. recommended limits for manganese.

Water Demand:

	Present	1995	2020
Population Served	1595	2555	3325
Average Day Use -GPD	-	-	-
Maximum Day Use -GPD	-	-	-
GPCD	-	-	-

Industrial Users: NA

Commercial Users: NA

Residential Users: NA

Water Rates: NA

EXISTING FACILITIES SUMMARY

Municipality: Waterloo, Nebraska
Type of Water: Municipal
Water System Governing Body:
Water Supply Source: 4 wells

Water Supply Source Capacity:

Well	Depth	Capacity
#1	60'	250 gpm
#2	58'	-
#3	-	-
#4	-	-
	Total =	

Storage Facilities: 20,000 gallon pressure tank
20,000 gallon pressure tank
40,000 gallons total storage

Treatment Purpose: None

Treatment Processes: None

Chemicals Used in
Treatment Processes: None

Treatment Capacity: None

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	NO_3	Cl	SO_4	Na
Well #1	8.1	390	0.3	0.8	0.46	232	256	77	0.0	14	38	26

The municipal well exceeds USPHS recommended limits for manganese and iron and is high in total hardness.

Water Demand:

	Present	1995	2020
Population Served	455	545	814
Average Day Use -GPD	-	-	-
Maximum Day Use -GPD	-	-	-
GPCD	-	-	-

Industrial Users: NA

Commercial Users: NA

Residential Users: NA

Water Rates: NA

EXISTING FACILITIES SUMMARY

Municipality: Bellevue, Nebraska
Type of Water: Municipal
Water System Governing Body:
Water Supply Source: 6 gravel packed wells and purchased water from the Metropolitan Utilities District (M. U. D.)
Water Supply Source Capacity:

Well	Depth	Capacity
#1	100'	460 gpm
#2		460 gpm
#3	89'	520 gpm
#4	83'	460 gpm
#5	95'	600 gpm
#6	101'	640 gpm
	Total =	3,140 gpm

A portion of the City north of Jewell Road is served by the Metropolitan Utilities District (MUD). Bellevue also purchases a maximum of 1,000,000 gallons per day from M. U. D. to provide the service area south of Jewell Road with adequate reserves to meet peak demands.

Storage Facilities:

135,800	gallon concrete reservoir
282,700	gallon concrete reservoir
723,700	gallon concrete reservoir
500,000	gallon elevated tank
1,642,200	gallons total storage

Treatment Purpose: Iron and manganese removal, softening, disinfection.

Treatment Process: Aeration, detention, lime softening, filtration, chlorination, and fluoridation.

Chemicals Utilized in the Treatment Process:
Hydrated lime, chlorine, sodium aluminate, sodium hexametaphosphate, hydro-fluosilicic acid.

Treatment Capacity: The water treatment plant has a capacity of 3.0 MGD, but the system is limited to capacity of approximately 1900 GPM by its high service pumps.

Water Quality:

Well	pH	Ts	Fe	Mn	F	ALK	Hard	Ca	NO_3	Cl	SO_4	Na
#1	8.0	568	11.5	1.0	0.3	392	304	108	0.8	10	54	41
#2	8.0	562	9.2	1.0	0.3	384	308	102	1.0	8	48	41
#3	7.7	706	12.2	1.5	0.3	464	332	126	1.0	14	63	66
#4	7.6	810	12.9	1.7	0.3	524	376	150	0.8	10	73	72
#5	7.7	704	10.9	1.0	0.3	516	392	124	0.8	8	63	72
#6	7.9	510	8.3	0.8	0.4	352	296	93	1.0	0	37	39
Distribution System	9.2	272	0.0	0.0	0.8	168	180	9	1.0	10	48	64

The municipal well waters exceed USPHS recommended limits for total solids, iron, manganese and are high in total hardness.

Water Demands:

	Existing
Population Served	12,328
Average Daily Use -GPD	1,400,000* or 2,300,000**
Maximum Daily Use GPD	3,700,000
GPCD	138

*Winter average day use
**Summer average day use.

Industrial: NA

Commercial: The major commercial water users are the schools, laundromats, and car washes

Residential: Approximately 90% of the total water usage is by residential customers.

Water Rates:

First 2,000 gallons	@ $.55/1000 gal.
Next 28,000 gallons	@ $.50/1000 gal.
Over 30,000 gallons	@ $.44/1000 gal.

Recommended Improvements

Immediate

1) No immediate needs.

Future

1) Future water requirements for Bellevue should be met by MUD.

EXISTING FACILITIES SUMMARY

Municipality: Gretna, Nebraska
Type of Water System: Municipal
Water System Governing Body:
Water Supply Source: 2 Wells

Water Supply Source Capacity:

Well	Depth	Capacity
# 1	306'	300 gpm
# 2	286'	80 gpm
#3	318'	400 gpm
#4	331'	375 gpm
	Total =	775 gpm

Wells #1 and #2 are no longer in use.

Storage Facilities: 56,000 gallon elevated tank

Treatment Purpose: None

Treatment Processes: None

Chemicals Used in Treatment Processes: None

Treatment Capacity: None

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	N03	Cl	SO_4	Na
Well #3	7.7	420	0.0	0.0	.28	308	276	83	.4	.0	19	22
Well #4	7.9	430	0.0	0.0	.28	324	292	90	.0	.0	23	19

The well water meets U.S.P.H.S. recommended limits, but is high in total hardness.

Water Demand:

	Present	1995	2020
Population Served	1557	4100	13,208
Average Day Use -GPD	125,000 - 175,000	553,500	-
Maximum Day Use -GPD	-	-	-
GPCD	80-112	135	-

Industrial Users: No existing industrial usage, but a paper factory is anticipated.

Commercial Users: The major commercial users are a car wash (432,390 gal/year), laundromat (452,400 gal/year and a school.

Residential Users: Approximately 95% of the total water usage is by residential customers.

Water Rates:

First	6,000 gallons @ $1.00
Next	10,000 gallons @ $ .60

Recommended Improvements:

Immediate:

1) Construction of a 500,000 gallon elevated storage tank

Additional Sources of Information:

Questionnaire returned by the City or Town.

EXISTING FACILITIES SUMMARY

Municipality: Offutt Air Force Base, Nebraska
Type of Water System:
Water System Governing Body:
Water Supply Source: 5 Gravel packed wells

Water Supply Source Capacity:

Well	Depth	Capacity
#3		650 gpm
#4		450 gpm
#5		450 gpm
#7		1000 gpm
#8		1000 gpm
	Total =	3550 gpm

Storage Facilities:
4 - 500,000 gallon ground reservoirs

Treatment Purpose:
Iron and manganese removal, softening, disinfection and fluoridation

Treatment Processes:
Aeration, coagulation, gravity filtration, chlorination, softening, recarbonation, fluoridation

Chemicals Used in
Treatment Processes:
Hydrated Lime, liquid chlorine, alum and sodium fluoride

Treatment Capacity: 3.23 MGD

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	N03	C1	SO_4	Na
Raw Water	7.7	518	9.7	0.0	.3	450	430	288	.1	4.5	27	0.0
Finished	NA											

Water Demand:

	Present		
Population Served	-	-	-
Average Day Use -GPD	-	-	-
Maximum Day Use -GPD	-	-	-
GPCD	-	-	-

Industrial Users: NA

Commercial Users: NA

Residential Users: 755 residential units, 33 N.C.O. and general quarters.

Water Rates: NA

Recommended Improvements

Immediate

1) No immediate needs

Future

1) Future water requirements should be met by M.U.D.

EXISTING FACILITIES SUMMARY

Municipality: Papillion, Nebraska
Type of Water System: Municipal
Water System Governing Body:
Water Supply Source: 5 Gravel Packed Wells and water purchased from the Metropolitan Utilities District

Water Supply Source Capacity:

Well	Depth	Capacity
#1	125'	110 gpm
#2	125'	110 gpm
#3	65'	260 gpm
#4	85'	225 gpm
#5	66'	115 gpm
	Total	820 gpm

The City has a contract with the Metropolitan Utilities District (M.U.D.) for a maximum of 2100 gpm of water. Currently they are using 800 gpm from M.U.D.

Storage Facilities: 500,000 gallon elevated tank.

Treatment Purpose: None

Treatment Processes: The municipal well water is untreated. The water supplied from the Platte River Plant by M.U.D. is clarified, softened, filtered, disinfected and fluoridated.

Chemicals Used in Treatment Processes: None

Treatment Capacity: None

Water Quality:

Well #	pH	TS	Fe	Mn	F	ALK	Hard	Ca	NO_3	Cl	SO_4	Na
#1	7.5	390	0.0	0.0	.27	296	284	88	2.4	0	14	32
#2	7.3	410	0.0	0.0	.25	304	296	88	3.6	4	14	33
#3	7.1	340	2.4	0.0	.29	252	244	70	6.4	4	4	29
#4	7.2	340	0.0	0.0	.30	268	252	67	3.4	2	3	32
#5	7.2	420	0.2	0.0	.42	280	320	88	3.9	12	21	29

	M.U.D. Water
pH	8.8 - 9.5
Hardness	130 - 150 mg/l as $CaCO_3$
Alkalinity	108 - 120 mg/l as $CaCO_3$
Manganese	.01 mg/l
Iron	.1 mg/l Fe^{++}
Phosphate	.3 - .4 mg/l PO_4
Calcium	80-90 mg/l $CaCO_3$
Magnesium	45-50 mg/l $CaCO_3$

Water Demand:

	Present	1995
Population Served	7,000*	35,000
Average Day Use - GPD	700,000	3,500,000
Maximum Day Use - GPD	2,100,000	10,500,000
Peak Hour -GPD	131,250	656,250
GPCD	100	100

*Estimated 1973 Population

Industrial Users: NA

Commercial Users: NA

Residential Users: Approximately 90% of the total water usage by residential customers.

Water Rates:

First	6,000 gallons @ $4.50
Next	24,000 gallons @ $0.55/1000 gal.
Over	30,000 gallons @ $0.50/1000 gal.

Recommended Improvements

Immediate
1) Construction of a 2.0 million gallon elevated storage tank.

Future
1) Construction of a 1.0 million gallon storage facility.
2) Addition of mains and improvement of the distribution system to meet demands.
3) Future water requirements should be met by M.U.D.

Additional Sources of Information:

Henningson, Durham & Richardson, Water System and Sanitary Trunk Sewer Collection System Report for Papillion, Nebraska, 1973.

Questionnaire returned by the City or Town.

EXISTING FACILITIES SUMMARY

Municipality: Springfield, Nebraska
Type of Water System: Municipal
Water System Governing Body:
Water Supply Source: 3 Gravel packed wells

Water Supply Source Capacity:

Well	Depth	Capacity
#1	120'	150 gpm
#2	110'	250 gpm
#3	196'	500 gpm
	Total	900 gpm

Storage Facilities: 25,000 gallon elevated tank

Treatment Purpose: None

Treatment Processes: None

Chemicals Used in
Treatment Processes: None

Treatment Capacity: None

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	N03	Cl	SO_4	Na
Well #1	7.9	390	0.6	0.1	.35	260	272	78	3.8	14	3	35
Well #2	7.8	340	0.1	0.1	.35	264	248	69	0.5	2	3	30

Water Quality for Well #3 was unavailable.

The well waters exceed U.S.P.H.S. recommended limits for manganese and are high in total hardness. Well #1 also exceeds recommended limits for iron.

Water Demand:

	Present	1995 or	1995*	2020
Population Served	748	3,378	2,350	6,362
Average Day Use - GPD	82,280	-	317,250	-
Maximum Day Use - GPD	175,500	-		-
GPCD	110	-	135	-

*MAPA projections

Industrial Users: None

Commercial Users: The major commercial user is the Springfield School.

Residential Users: A majority of the water consumption is by residential customers.

Water Rates:

Residential	@ $12.00/Quarter
School District	@ $60.00/Quarter

Recommendations

Immediate

1) Construction of a 250,000 gallon storage tank
2) Extension of the existing distribution system
3) Water pumpage and consumption records should be kept.

Future

1) Consideration of buying water from the Metropolitan Utilities District (M.U.D.)

Additional Sources of Information

Henningson, Durham & Richardson, Waterworks System Report for Springfield, Nebraska, 1969

EXISTING FACILITIES SUMMARY

Municipality: Arlington, Nebraska
Type of Water: Municipal
Water System Governing Body:
Water Supply Source: 3 Wells

Water Supply Source Capacity:

Well	Depth	Capacity
1	85'	250 gpm
2	85'	300 gpm
3	148'	250-325 gpm
		800-875 gpm

Storage Facilities: 40,000 gallon elevated tank

Treatment Purpose: 2 wells pump water to the treatment plant for iron-manganese and hydrogon sulfide removal. The third well pumps directly into the distribution system.
Treatment Processes: Aeration, gravity filtration, sedimentation.

Chemicals Used in Treatment Processes: None

Treatment Capacity: 300 gpm

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	N03	Cl'	S04	Na
Well #1	7.4	610	0.6	0.5	0.43	352	408	128	0.1	18	169	77
Well #3	7.6	490	0.2	0.2	0.6	312	316	93	0.1	105	12	80
Finished	7.5	510	0.1	0.1	0.46	296	364	112	0.1	20	167	74

The finished water exceeds the recommended limit for total solids and manganese and is high in total hardness.

Water Demand:

	Present	1995	2020
Population Served	910	1345	1446
Average Day Use -GPD	---	----	----
Maximum Day Use -GPD	500,000	----	----
GPCD	---	----	----

Industrial Users: NA

Commercial Users: NA

Residential Users: NA

Water Rates: *

First 3,000 gallons @ $5.50/quarter
Next 10,000 gallons @ $0.20/1000 gallons
Over 13,000 gallons @ $0.15/1000 gallons

*Based on quarterly billing period.

Recommended Improvements:

Immediate

1) No immediate needs.

Future

1) Addition of a 250,000-300,000 gallon elevated tank.
2) Connection of system to county water system by 1980.

EXISTING FACILITIES SUMMARY

Municipality: Blair, Nebraska
Type of Water Supply System: Municipal
Source: 11 gravel packed wells

Source Capacity:

Well	Depth	Capacity
#2	124'	140 gpm
#3	121	200
#4	110	120
#5	110	300
#6	110	100
#7	84	350
#8	89	425
#9	105	85
#10	120	95
#11	122	95
#12	113	95
	Total	2,005 gpm

Storage Facilities:

200,000 gallon covered concrete reservoir
500,000 gallon covered concrete reservoir
200,000 gallon covered concrete reservoir
900,000 gallons total storage

Treatment Purposes: Iron and manganese removal, softening, hydrogen sulfide removal.

Treatment Process: Aeration, lime softening, filtration and disinfection.

Chemicals Used in the Treatment Process: Chlorine (16 lb/day), lime (1600 lb/day) and alum (18 lb/day)

Treatment Capacity: 1050 gpm

Water Quality

Well	pH	Ts	Fe	Mn	F	ALK	Hard	Ca	NO_3	Cl	SO_4	Na
#2	7.6	810	0.0	0.4	.21	144	348	46	.0	14	212	245
#3	7.8	700	1.8	0.4	.19	160	356	54	.0	18	208	220
#4	7.4	530	8.5	1.5	.43	392	424	115	.0	18	10	21
#5	7.5	480	9.5	0.7	.41	396	332	104	.0	0.0	10	33
#6	7.8	550	1.2	0.8	.46	412	384	110	3.4	8	16	46
#7	7.5	1280	21.5	1.0	.46	576	740	128	.0	12	207	235
#8	7.3	1780	12.5	0.6	.35	564	760	224	.0	16	520	315
#9	7.3	400	4.5	0.9	.48	276	308	80	.0	14	16	23
#12	7.4	490	3.0	0.7	.53	332	352	99	.0	22	16	27
After Treatment	7.6	790	0.0	0.0	.26	120	340	43	1.0	18	214	235

Well #10 and Well #11 have no quality data available. The finished water exceeds U.S.P.H.S. recommended limits for total solids and is high in total hardness.

Water Demands:

	Existing	1995	2020
Population Served	6,106	9,343	10,393
Average Daily Use - GPD	1,152,000*	-	-
Maximum Daily Use - GPD	1,940,000	-	-

*Average day winter use.

Industrial Use: No major industrial users.

Commercial Use: The major commercial users are 4 nursing homes, a hospital, a high school, 4 elementary schools and Dana College.

Residential Use: NA

Water Rates: NA

Recommended Improvements:

Immediate: Addition of 1.25 million gallons of storage facilities.

Future:

1) Construction of river intake and water treatment plant along the Missouri River.
2) Separation of distribution system into high elevation and low elevation systems.

Additional Sources of Information:

Kirkham, Michael & Associates, Omaha, Nebraska, Water Procurement and Treatment Facilities, Study and Report, Blair, Nebraska, 1968.

Kirkham, Michael & Associates, Omaha, Nebraska, Water Distribution Systetem Study and Report, Blair, Nebraska, 1968.

EXISTING FACILITIES SUMMARY

Municipality: Fort Calhoun, Nebraska
Type of Water: Municipal
Water System Governing Body:
Water Supply Source: 3 Wells

Water Supply Source Capacity:

Well	Depth	Capacity
1	Abandoned	
2	121'	50 gpm
3	151'	20 gpm
4	66'	25 gpm
5	---	---

Wells No. 3 and No. 4 pump directly to the distribution system and are used to offset peak demands.

Storage Facilities: 250,000 Gallon Steel Surface Reservoir

Treatment Purpose: Iron and Manganese Removal, Hydrogon Sulfide Removal

Treatment Processes: Aeration, Disinfection, Pressure Filtration, Sedimentation

Chemicals Used in Treatment Processes: Sodium Carbonate, Hypocklorite

Treatment Capacity: 75 gpm

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	NO_3	Cl'	SO_4	Na
Well #2	7.1	560	2.0	0.3	0.27	452	396	118	0.0	6	2	24
Well #3	7.1	600	4.7	0.1	0.34	496	444	118	0.0	0.0	8	50
Well #4	7.0	540	3.3	0.2	0.31	436	372	102	0.0	4	2	16
Finished	7.2	550	0.0	0.2	0.34	440	388	94	0.0	8	2	26

The finished water exceeds U.S. P.H.S. recommended limits for total solids, manganese and is high in total hardness.

Water Demand:

	Present	1995	2020
Population Served	642	1353	1708
Average Day Use -GPD	78,000*	-----	----
Maximum Day Use -GPD	171,000*	-----	----
GPCD	130*	-----	----
	*1968 data		

Industrial Users: NA

Commercial Users: NA

Residential Users: NA

Water Rates: *
First 3,000 gallons @ $6.00/month
Next 12,000 gallons @ $0.50 /1000 gallons
Over 15,000 gallons @ $0.30/1000 gallons

*Based on monthly billing period.

Recommended Improvements:
Immediate
1) Extension of water mains.
2) Development of another well to supplement existing supply.
Future
1) Creation of a rural water district, connection with Blair, Nebraska water system, or construction of water treatment plant.

Additional Source of Information:
Kirkham, Michael & Associates, Omaha, Nebraska, Water System Improvements, Fort Calhoun, Nebraska, 1968.

EXISTING FACILITIES SUMMARY

Municipality: Herman, Nebraska
Type of Water System: Municipal
Water System Governing Body:
Water Supply Source: 2 Wells

Water Supply Source Capacity:

Well	Depth	Capacity
#1 (Abandoned)	60'	185 gpm
NA(Aba	197'	75-150 gpm
#2	60'	100 gpm
#3	60'	200 gpm
	Total =	300 gpm

Storage Facilities:
58,000 gallon standpipe

Treatment Purpose: Iron and manganese removal, H_2S control, Disinfection

Treatment Processes: Aeration, Chlorination, Pressure filtration, Sedimentation

Chemicals Used in Treatment Processes: Calcium hypochlorite (0.2 ppm), Chlorine

Treatment Capacity: 150 gpm

Water Quality:

Well	pH	TS	Fe	Mn	F	ALK	Hard	Ca	N03	Cl	SO_4	Na
#3	8.0	402	1.5	0.7	0.5	348	324	58	0.0	6	9	24
Finished	8.1	346	0.1	0.0	0.5	184	176	43	0.0	6	18	43

The water quality for Well #2 was not available. The finished water meets U.S.P.H.S. recommended limits.

Water Demand:

	Present	1995	2020
Population Served	323	311	284
Average Day Use - GPD	65,000	-	-
Maximum Day Use -GPD	175,000	-	-
GPCD	-	-	-

Industrial Users: NA

Commercial Users: NA

Residential Users: NA

Water Rates:	Residence with minimum plumbing	$21.00/year
	Residence with normal plumbing	$24.00/year
	Commercial and Industrial Users	$24.00/year-up (varies)

Recommended Improvements:

Immediate
1) No immediate needs

Future
1) Extend the distribution system

EXISTING FACILITIES SUMMARY

Municipality: Kennard, Nebraska
Type of Water System: Municipal
Water System Governing Body:
Water Supply Source: 2 gravel packed wells.

Water Supply Source Capacity:

Well	Depth	Capacity
#1	160'	50 gpm
#2	191	200 gpm
	Total	250 gpm

Storage Facilities: 33,000 gallon standpipe

Treatment Purpose: None

Treatment Processes: None

Chemicals Used in Treatment Processes: None

Treatment Capacity: None

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	N03	Cl	SO_4	Na
Well #1	7.8	530	1.9	0.6	.52	424	396	112	.0	4	6	51
Well #2	7.6	430	4.4	1.0	.41	320	300	82	.0	16	9	32

The well water exceeds U.S.P.H.S. recommended limits for iron, manganese and is high in total hardness.
Well #1 exceeds limits for total solids.

Water Demand:

	Present	1995	2020
Population Served	336	341	311
Average Day Use - GPD	113,000	-	-
Maximum Day Use-GPD	-	-	-
GPCD	337	-	-

Industrial Users: None

Commercial Users: The major commercial users are local businesses, filling stations, and a school.

Residential Users: Approximately 98% of the total water usage is by residential customers.

Water Rates:

Residence with full bath	@ $9.00/quarter
Residence with half bath	@ $7.50/quarter
Connection with no bath	@ $3.00/quarter
Business	@$12.00/quarter
School	@$30.00/quarter

Recommended Water Supply Improvements

Immediate: Water Main Extensions

Additional Sources of Information

Questionnaire returned by the City or Town

EXISTING FACILITIES SUMMARY

Municipality: Washington
Type of Water System: Private
Water System Governing Body:
Water Supply Source: Private Wells

Water Supply Source Capacity: Individual wellsare shallow with small capacities.

Storage Facilities: None

Treatment Purpose: None

Treatment Processes: None

Chemicals Used in Treatment Processes: None

Treatment Capacity: None

Water Quality:

pH	TS	FE	Mn	F	ALK	Hard	Ca	NO_3	Cl	SO_4	Na
Not Available											

Water Demand:

	Present	1995	2020
Population Served	76	149	284
Average Day Use -GPD	-	-	-
Maximum Day Use -GPD	-	-	-
GPCD	-	-	-

Industrial Users: None

Commercial Users: NA

Residential Users: NA

Recommended Improvements: Construction of a distribution system drawing water from a proposed rural water district and a small reservoir with a pumping station.

EXISTING FACILITIES SUMMARY

Municipality: Metropolitan Utilities District-MUD
Direct Service
Omaha, Ralston, Millard*, Boys Town, North Bellevue, LaVista - Nebraska
Wholesale Service
Papillion, South Bellevue, Capehart-Nebraska
Carter Lake - Iowa

*Millard water system operated by MUD.

Type of water system: Utilities district

Water System Governing Body: Metropolitan Utilities District Board of Directors

Water Supply Source: Missouri River surface intake on the Florence Plant and Platte River well field at the Platte River Plant.

Water Supply Source Capacity:

River Intake at Florence Plant

Pump	Capacity
#1	60 MGD
#2	35 MGD
#3	50 MGD
#4	50 MGD
#5	50 MGD
Total =	245 MGD

Well Field at Platte River Plant

Quantity	Capacity
3	2200 gpm each
3	1800 gpm each
6	1400 gpm each
3	1400 gpm each
8	1100 gpm each
14	700 gpm each
Total =	44600 gpm = 62.2 MGD

Storage Facilities:

6,000,000	gallon covered reservoir
6,000,000	gallon covered reservoir
12,000,000	gallon covered reservoir
25,000,000	gallon covered reservoir
6,000,000	gallon covered reservoir
50,000	gallon elevated tank
55,050,000	gallons total storage

Treatment Purpose: Florence Plant
Softening, disinfection, purification
Platte River Plant
Softening, disinfection, iron and manganese removal

Treatment Process: Florence Plant
Presedimentation, chlorination, coagulation, sedimentation, mixing, flocculation, clarification, hardness removal.
Platte River Plant
Hardness removal, gravity filtration

Chemicals Used in Treatment Process: Florence Plant
Alum, silicate, lime, chlorine, polyelectrolyte, fluosilicic acid, soda ash
Platte River Plant
Lime, alum, potassium permanganate, chlorine, fluosilicic acid.

Treatment Capacity:

Florence Plant	140 MGD
Platte River Plant	-60 MGD
Total =	200 MGD

Water Quality:

	pH	TS	Fe	Mn	ALK	Hard	Ca	NO_3	CL	SO_4	Na
Florence											
Raw	8.25	557	-	.11	166	251	62	3.6	11	188	53
Finished	9.2	407	0	.02	71	161	41	3.25	16	189	54
Platte River											
Raw	7.7	500	.01	.13	188	214	61	3.1	36	100	43
Finished	9.15	386	0	.01	115	147	40	3.02	38	97	42

Water Demand:

	1973	1974	1995	2020
Population Served	430,000			
Avg Day Use-GPD	76,433,000	83,398,000		
Max Day Use-GPD	157,068,000	178,600,000		
Max Hour Use-GPD	-	234,000,000		
GPCD	178			

Industrial Users: Approximately 18% of the total water usage is by industrial users. There were 78 industrial customers in 1974.

Commercial Users: Approximately 26% of the total water usage is by commercial users. There were 14,805 commercial customers in 1974.

Residential Users: Approximately 38% of the total water usage is by residential users. There were 96,951 residential customers in 1974.

Other Users: City, School, Special Wholesale and unaccounted for water account for approximately 18% of the total water usage. There were 438 other customers in 1974.

Water Rates:* First 300 cubic feet @ $2.10
Next 4,700 cubic feet @ $0.275/100 cu. ft.
Next 95,000 cubic feet @ $0.221/100 cu. ft.
Next 150, 000 cubic feet @ $0.19/100 cu. ft.
Over 250,000 cubic feet @ $0.165/100 cu. ft.
*based on monthly billing period.

Customers purchasing water outside the boundaries of the District pay one and one-half (1 1/2) times the above rates.

Recommended Improvements:

Immediate

1) Addition of water treatment plant waste handling facility at Florence Plant and Platte River Plant.

2) Construction of steel standpipe at Harrison Pumping Station.

3) Improvement of distribution piping to maintain adequate system pressures.

Future

4) Addition of 20 MGD pumping capacity at Rainwood Pumping Station.

5) Construction of 20 MG of storage at Rainwood Pumping Station.

6) Expansion of Florence Plant by 50 MGD.

7) Construction of 5 MG storage at Florence Plant.

8) Construction of pumping and storage facilities at 132nd and Fort St.

9) Extension and improvement of piping network to serve developing areas.

Additional Sources of Information:

Henningson, Durham & Richardson, Omaha, Nebraska.
Long Range Comprehensive Water System Master Plan,
Metropolitan Utilities District, Omaha, Nebraska, 1972.

EXISTING FACILITIES SUMMARY

Municipality: Dunlap, Iowa
Type of Water System: Municipal
Water System Governing Body: City Council
Water Supply Source: 2 Gravel Packed Wells

Water Supply Source Capacity:

Well	Depth	Capacity
1	88'	231 gpm
2	85'	215 gpm
	Total =	446 gpm

Storage Facilities: 45,000 Gallon Stand Pipe

Treatment Purpose: Water Stabilization

Treatment Processes: Chemical Dosages of Phosphate Compounds at Well #2.

Chemicals Used in Treatment Processes: Polyphosphate (4.4 lb/day)

Treatment Capacity:

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	N03	Cl	SO_4	Na
Well #1	6.7	604	.02	.14	.25	350	460	132	30	27	91	18
Well #2	6.8	632	<.02	.10	.25	350	470	140	27	21	110	20

The municipal well water exceeds U.S. P.H.S. recommended limits for total solids, manganese and is high in total hardness.

Water Demand:

	Present	1995	2020
Population Served	1,292	1,485	1,511
Average Day Use -GPD	122,000	---	---
Maximum Day Use -GPD	217,000	---	---
GPCD	---	---	---

Industrial Users: NA

Commercial Users: NA

Residential Users: NA

Water Rates: NA

Recommend Improvements:

Immediate

1) Construction of a new treatment plant, including iron-manganese removal, softening, chlorination.
2) Extension of distribution system to N. E. fringe of town.
3) Construction of a 300,000 gallon elevated tankk

Future

1) Increase well field capacity by 0.40 mgd.
2) Expansion of treatment plant by 0.88 mgd.
3) Construction of rural storage facilities in Crawford and Shelby Counties with a capacity of 0.06 mg.

Additional Sources of Information:

Kirkham, Michael & Associates, Omaha, Nebraska. Municipal Water System, Dunlap, Iowa, 1965.

EXISTING FACILITIES SUMMARY

Municipality: Little Sioux, Iowa
Type of Water System: Municipal
Water System Governing Body: City Council
Water Supply Source: 1 Drilled Well

Water Supply Source Capacity:

Well	Depth	Capacity
# 1	109'	42 gpm

Storage Facilities: 67,000 Gallon Stand Pipe

Treatment Purpose: Iron and Manganese Removal, Disinfection

Treatment Processes: Pre-Chlorination, Aeration, Pressure Filtration

Chemicals Used in Treatment Processes: Hypochlorite

Treatment Capacity: 45 gpm

Water Quality:

	pH	TS	FE	Mn	F	ALK	Hard	Ca	NO_3	Cl	SO_4	Na
Well #1	6.9	740	6.7	.36	.2	488	570	150	.01	7	150	26
Finished	7.2	705	0.03	.36	.2	500	570	151	<.01	11	150	34

The finished water exceeds U.S. P.H.S. recommended limits for total solids, manganese, and is high in total hardness.

Water Demand:

	Present	1995	2020
Population Served	239	283	283
Average Day Use -GPD	20,000	---	---
Maximum Day Use -GPD	41,800	---	---
GPCD	---	---	---

Industrial Users: None

Commercial Users: NA

Residential Users: NA

Water Rates: NA

Recommended Improvements:

Immediate

1) Addition of temporary well field with a capacity of 0.10 mgd.
2) Construction of 150,000 gallon ground reservoir.
3) Expansion of distribution system to serve River Sioux.

Future

1) Further expansion of distribution system to supply developing areas.

EXISTING FACILITIES SUMMARY

Municipality: Logan, Iowa
Type of Water: Municipal
Water System Governing Body: City Council
Water Supply Source: 4 Gravel Packed Wells

Water Supply Source Capacity:

Well	Depth	Capacity
1	60'	-
2	60'	-
3	Abandoned	-
4	60'	-
5	60'	-
	Total =	600-852 gpm

Storage Facilities: 120,000 gallon steel tank

Treatment Purpose: Iron and Manganese Removal, Disinfection

Treatment Processes: Aeration, Gravity Filtration, Chlorination, Water Stabilization

Chemicals Used in Treatment Processes: Chlorine (0.5 ppm)
Sodium Hexameta Phosphate (0.5 ppm)

Treatment Capacity: 350 gpm

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	NO_3	Cl'	SO_4	Na
Well #1A	6.9	542	0.36	0.49	.3	388	460	124	5	9	93	16
Well #2	6.9	430	0.68	0.25	.25	340	368	99.2	19	7	40	17
Well #5	6.8	673	5.2	2.4	.25	372	480	132	8.2	32	150	50
Finished	7.15	641	<0.02	1.9	.25	372	470	136	7.3	27	150	44

The finished water exceeds U.S. P.H.S. recommended limits for total solids, manganese and is high in total hardness.

Water Demand:

	Present	1995	2020
Population Served	1,526	1781	1844
Average Day Use -GPD	160,000	----	----
Maximum Day Use -GPD	400,000	----	----
GPCD	----	----	----

Industrial Users:

Commercial Users: The largest commercial users are a laundromat (328,000 gal./quarter), a car wash (231,000 gal./quarter) and a nursing home (550,000 gal./quart

Residential Users: Approximately 80% of the total water usage is by residential users.

Water Rates: *

First 6,000 gallons @ $3.00/1000 gallons
Next 14,000 gallons @ $0.50/1000 gallons
Next 10,000 gallons @ $0.45/1000 gallons
Over 30,000 gallons @ $0.35/1000 gallons

*Based on a quarterly billing period.

Recommended Improvements:

Immediate

1) Improvement of Iron and Manganese.
2) Extension of the distribution system to the town's fringe areas.

Future

1) Addition of a 12" main from Missouri Valley.
2) Addition of a 8" main from Woodbine.
3) Addition of a 6" main from Magnolia.
4) Extension of distribution system to service new developments.
5) Installation of a new well (200-250 gpm).

Additional Sources of Information:

Questionnaire returned by the City or Town.

EXISTING FACILITIES SUMMARY

Municipality: Magnolia, Iowa
Type of Water System: Municipal
Water System Governing Body: City Council
Water Supply Source: 1 Well

Water Supply Source Capacity:

Well	Depth	Capacity
#1	-	35 gpm

Storage Facilities: 14,000 Gallon Stand Pipe

Treatment Purpose: Iron and Manganese Removal, Disinfection

Treatment Processes: Aeration, pressure filtration, disinfection with hypochlorite, odor and task control with potassium permanganate, water stabilization with phosphate compounds.
Chemicals Used in Treatment Processes: Hypochlorite, Potassium Permanganate, Phosphate Compounds.
Treatment Capacity: 45 gpm

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	N03	Cl	SO_4	Na
Well #1	7.0	529	0.37	.07	.15	438	424	110	<.1	3	57	23
Plant Effluent	7.45	513	0.02	.01	.10	426	392	100	<.1	8	52	43

The finished water exceeds U.S. P.H.S. recommended limits for total solids and is high total hardness.

Water Demand:

	Present	1995	2020
Population Served	206	204	180
Average Day Use -GPD	---	---	---
Maximum Day Use -GPD	---	---	---
GPCD	---	---	---

Industrial Users: None

Commercial Users: NA

Residential Users: NA

Water Rates: NA

Recommended Improvements:

Immediate

1) Development of a new well field with a capacity of 0.09 mgd.
2) Construction of a 40,000 gallon elevated tank.
3) Completion of the distribution system.

Future

1) Extension of a 6" main to Pisgah, Logan and Mondamin.

EXISTING FACILITIES SUMMARY

Municipality: Missouri Valley, Iowa
Type of Water: Municipal
Water System Governing Body: City Council
Water Supply Source: 3 Gravel Parked Wells

Water Supply Source Capacity:

Well	Depth	Capacity
1	85'	570 gpm
2	90'	550 gpm
3	91'	525 gpm
	Total	1645 gpm *

*The maximum flow that can be drawn from the aquifer, with the existing wells, is 840 gpm. This flow could only be systained for a short period of time due to lowering of the water table.

Storage Facilities:
300,000 gallon open surface reservoir

Treatment Purpose: Iron and Manganese Removal, Disinfection

Treatment Processes: Aeration, Sedimentation, Chlorination, Gravity Filtration

Chemicals Used in Treatment Processes: Chlorine Gas (3,000 lb/year)

Treatment Capacity: 1.0 mgd

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	NO_3	Cl	SO_4	Na
Well #1	7.3	928	3.2	.75	.25	445	675	158	5.0	74	230	53
Well #2	7.0	518	0.44	.22	.25	406	451	128	3.2	12	57	19
Well #3	7.1	728	0.77	.34	.25	408	551	136	7.1	40	160	42
Finished	7.55	692	<.02	<.05	.25	402	541	132	6.2	40	150	40

The finished water exceeds U.S. P.H.S. recommended limits for total solids and is high in total hardness.

Water Demand:

	Present	1995	2020
Population Served	3,519	3,930	4,341
Average Day Use -GPD	432,000	-----	-----
Maximum Day Use -GPD	789,000	-----	-----
GPCD	123	-----	-----

Industrial Users:

Commercial Users: The large users in 1973 were: three laundromats (2,678,000 gallons), two car washes (280,000 gallons/year), a hospital (15.92 mgy), a nursing home (2.783 mgy) and a high rise apartment building (2.047 mgy).

Residential Users: Residential Customers Use Approximately 55% Of The Total Water Consumption.

Water Rates: *

First 10,000 gallons @ $0.65/1000 gallons
Next 10,000 gallons @ $0.52/1000 gallons
Next 20,000 gallons @ $0.39/1000 gallons
Next 40,000 gallons @ $0.33/1000 gallons
Next 80,000 gallons @ $0.26/1000 gallons
Over 160,000 gallons @ $0.20/1000 gallons

*Minimum Bill - 5,000 gallons @ $3.25
Based on quarterly billing period.

Recommended Improvements:

Immediate

1) Addition of softening to treatment process.
2) Extension of distribution system to fringe areas.
3) Expansion of treatment facilities.

Future

1) Construction of a 500,000 gallon elevated tank.
2) Construction of additional underground storage facilities.
3) Modification of pumping station of 8th and Linn to meet demands.
4) Addition of another well.

Additional Information Sources:

Henningson, Durham & Richardson, Omaha, Nebraska. Waterworks system report for Missouri Valley, Iowa, 1968.

EXISTING FACILITIES SUMMARY

Municipality: Modale, Iowa
Type of Water System: Municipal
Water System Governing Body: City Council
Water Supply Source: 2 Drilled Gravel Parked Wells

Water Supply Source Capacity:

Well	Depth	Capacity
#1	104'	75 gpm
#2	96'	75 gpm
		Total =150 gpm

Storage Facilities: 25,000 Gallon Elevated Tank

Treatment Purpose: Iron and Manganese Removal, Softening, Disinfection

Treatment Processes: Aeration, Pressure Filtration, and Zeolite softening, Disinfection with Hypochlorite

Chemicals Used in Treatment Processes: Hypochlorite

Treatment Capacity: 70 gpm

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	N03	Cl	SO_4	Na
Well #1	6.7	517	7.2	.70	.25	468	440	112	< .1	.05	26	23
Well #2	6.85	546	6.8	.72	.30	456	440	116	< .1	4	26	23
Finished	7.0	608	1.3	.07	.25	494	440	128	< .1	3	31	240

The finished water exceeds U.S. P.H.S. recommended limits for total solids, iron, manganese and is high in total hardness and sodium.

Water Demand:

	Present	1995	2020
Population Served	297	275	250
Average Day Use -GPD	35,000	---	---
Maximum Day Use -GPD	91,000	---	---
GPCD	---	---	---

Industrial Users: None

Commercial Users: NA

Residential Users: NA

Water Rates: NA

Recommended Improvements:

Immediate

1) Extend distribution system to fringe areas of the city.

Future

1) Develop well field by 0.11 mgd.

EXISTING FACILITIES SUMMARY

Municipality: Mondamin, Iowa
Type of Water System: Municipal
Water System Governing Body: Board of Trustees
Water Supply Source: 2 Drilled & Gravel Packed Wells

Water Supply Source Capacity:

Well	Depth	Capacity
#1	90'	175 gpm
# 2	96'	130 gpm
	Total =	305 gpm

Storage Facilities: 65,000 Elevated Tank

Treatment Purpose: Iron and Manganese Removal, Disinfection

Treatment Processes: Aeration, Pressure Filtration, Chlorination

Chemicals Used in Treatment Processes: Chlorine

Treatment Capacity: 300 gpm

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	N03	Cl	SO_4	Na
Well #1	6.7	752	.10	.37	.15	556	600	160	1.4	28	95	39
Well #2	6.8	854	.04	.45	.10	580	670	175	6.0	43	130	56
Finished	6.8	739	.11	.28	.15	550	600	155	1.4	29	99	43

The finished water exceeds U.S. P.H.S. recommended limits for total solids, manganese and is high in total hardness.

Water Demand:

	Present	1995	2020
Population Served	420	395	314
Average Day Use -GPD	70,000gpd	----	----
Maximum Day Use -GPD	183,000 gpd	----	---
GPCD	----	----	----

Industrial Users: There are no major industrial users.

Commercial Users: NA

Residential Users: NA

Water Rates: NA

Recommended Improvements:

Immediate

1) Addition of chlorination to treatment process and consideration of softening.
2) Extension of distribution system to fringe areas of town.

Future

1) Extension of system to meet needs.

EXISTING FACILITIES SUMMARY

Municipality: Persia , Iowa
Type of Water: Municipal
Water System Governing Body: City Council
Water Supply Source: 3 Gravel Packed Well

Water Supply Source Capacity:

Well	Depth	Capacity
West	92'	15 gpm
Lower West	147'	15 gpm
Lower East	90'	15 gpm
		Total = 45 gpm

Storage Facilities: 77,000 Gallon Elevated Tank

Treatment Purpose: Iron and Manganese Removal, Disinfection and Softening

Treatment Processes: Aeration, Sedimentation, Pressure Filtration and Zeolite Softening, Chlorination

Chemicals Used in
Treatment Processes: Chlorine, Soda Ash ($1585/Year Annual Chemical Cost)

Treatment Capacity: 300,000 gpd

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	NO_3	Cl'	SO_4	Na
West Well	7.0	484	.04	.01	.45	306	372	97.6	30	13	57	17
Lower West Well	7.3	787	.88	.06	.35	346	380	99.2	.1	6	300	120
Lower East Well	7.2	933	1.2	.08	.30	346	460	120	1.2	7	400	130
Finished	7.4	747	.05	.01	.35	330	50	14	1.2	11	250	260

The finished water exceeds U.S. P.H.S. recommended limits for total solids and sulfates and is high in sodium.

Water Demand:

	Present	1995	2020
Population Served	316	305	285
Average Day Use -GPD	29,500 gpd	---	---
Maximum Day Use -GPD	34,000 gpd	---	---
GPCD	---	---	---

Industrial Users: None

Commercial Users: The large commercial user is a laundromat (15,000 gal/month). The remaining commercial users use 6000 gal/month.

Residential Users:

Water Rates: *
First 1500 gallons @ $4.00
Over 1500 gallons @ $0.12/100 gallons

*Based on quarterly billing.

Recommended Improvements:

Immediate

1) Addition of a 0.03 mgd well.
2) Expansion of the distribution system West and South.

Future

1) Addition of a 4" main from Portsmouth to obtain 0.09 mgd.

Additional Information Sources:
Questionnaire returned by the City or Town.

EXISTING FACILITIES SUMMARY

Municipality: Pisgah, Iowa
Type of Water System: Municipal
Water System Governing Body: City Council
Water Supply Source: 2 Gravel Packed Wells

Water Supply Source Capacity:

Well	Depth	Capacity
1	102'	150 gpm
2	43.5'	150 gpm
	Total =	300 gpm

Storage Facilities: 40,000 Gallon Concrete Cistern On Hillside

Treatment Purpose: None

Treatment Processes: None

Chemicals Used in Treatment Processes: None

Treatment Capacity: None

Water Quality:

	pH	TS	FE	Mn	F	ALK	Hard	Ca	NO_3	Cl	SO_4	Na
Well #2	7.25	387	.06	<.05	0.2	366	364	88	0.4	.5	19	8.0

Well #2 meets U.S. P.H.S. recommended limits, but is high in total hardness.

Water Demand:

	Present	1995	2020
Population Served	286		
Average Day Use -GPD	22,000	- -	---
Maximum Day Use -GPD	53,000	---	---
GPCD	---	---	---

Industrial Users: None

Commercial Users: NA

Residential Users: NA

Water Rates: NA

Recommended Improvements:

Immediate

1) Addition of a treatment plant for iron-manganese removal, softening, chlorination, with a 0.15 capacity.
2) Construction of a 150,000 gallon ground storage reservoir (3 miles West) with a 6" feeder main to town.
3) Expansion of distribution system into rural areas.

Future

1) Development of the well field by an additional 0.2 mgd.
2) Expansion of treatment facilities by 0.45 mgd.
3) Further expansion of distribution system to developing areas.

EXISTING FACILITIES SUMMARY

Municipality: Woodbine, Iowa
Type of Water System: Municipal
Water System Governing Body: City Council
Water Supply Source: 2 Drilled & Gravel Packed Wells

Water Supply Source Capacity:

Well	Depth	Capacity
1	95'	250 gpm
2	96'	180 gpm
		Total = 430 gpm

Storage Facilities: 110,000 gallon elevated tank

Treatment Purpose: Disinfection

Treatment Processes: Chlorination in Well #1

Chemicals Used in Treatment Processes: Chlorine (1.7 lb/day in Well #1)

Treatment Capacity:

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	N03	Cl	SO_4	Na
Well #1	6.85	529	.01	.21	.25	346	440	116	7.4	11	110	22
Well #2	6.85	530	.09	.02	.25	378	470	127	32	13	120	19

The municipal well water exceeds U.S. P.H.S. recommended limits for total solids and is high in total hardness. Well #1 exceeds the recommended manganese limits.

Water Demand:

	Present	1995	2020
Population Served	1,349	1700	1848
Average Day Use -GPD	133,000	---	---
Maximum Day Use -GPD	229,000	---	---
GPCD	---	---	---

Industrial Users:

Commercial Users: The larger commercial users are a laundromat (60,000 gallons/month) and a car wash (20,000-35,000 gallons/month).

Residential Users: Approximately 90% of total water usage is by residential customers.

Water Rates: *

First 3,000 gallons @ $1.80
Next 15,000 gallons @ $0.33/1000 gallons
Next 72,000 gallons @ $0.28/1000 gallons
Next 90,000 gallons @ $0.23/1000 gallons
Next 180,000 gallons @ $0.18/1000 gallons
Over 360,000 gallons @ $0.13/1000 gallons

* Based on quarterly billing period.

Recommended Improvements:

<u>Immediate</u>

1) Extension of the distribution mains to Southwest.

<u>Future</u>

1) Extension of a 10" main from Dunlap.
2) Extension of 8" main from Logan.

Additional Information Sources:

Questionnaire returned by the City or Town.

EXISTING FACILITIES SUMMARY

Municipality: Emerson, Iowa
Type of Water System: Municipal
Water System Governing Body: City Council
Water Supply Source: 2 gravel packed wells

Water Supply Source Capacity:

Well	Depth	Capacity
#3	126'	150 gpm
#4	177'	150 gpm
	Total =	300 gpm

Storage Facilities: 50,000 gallon elevated steel tank

Treatment Purpose: None

Treatment Processes: None

Chemicals Used in Treatment Processes: None

Treatment Capacity: None

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	NO_3	Cl	SO_4	Na
Well #3	6.7	469	.03	.01	.25	224	360	95	71	27	52	14
Well #4	6.95	334	.03	<.01	.35	254	284	77	21	3	27	9.8

The municipal well waters exceed U.S.P.H.S. recommended limits for nitrates in Well #3. The water is also high in total hardness.

Water Demand:

	Present	1995	2020
Population Served	484	574	620
Average Day Use -GPD	50,000 gpd	-	-
Maximum Day Use -GPD	110,000 gpd	-	-
GPCD	90	-	-

Industrial Users: There are no industrial water users.

Commercial Users: The largest commercial users are a laundromat (45,000 gallons per month) and a car wash (26,000 gallons per month).

Residential Users: Approximately 90 percent of the total water usage is by residential users.

Water Rates:

First	1,000 gallons @ $3.50
Next	2,000 gallons @ $0.60/1000 gallons
Next	2,000 gallons @ $0.50/1000 gallons
Over	5,000 gallons @ $0.30/1000 gallons

Recommended Improvements:

Immediate

1) No immediate needs

Future

1) Addition of treatment facilities, if necessary

2) Service extension to developing areas

Additional Sources of Information: Questionnaire returned by the City or Town.

EXISTING FACILITIES SUMMARY

Municipality: Glenwood, Iowa

Type of Water System: Municipal

Water System Governing Body: City Council

Water Supply Source: Surface supply from Keg Creek
3 gravel packed wells near Pacific Junction

Source Capacity

Wells	Depth	Capacity
#1	90'	-
#2	90'	-
#3	90'	-

The total capacity of the wells and the Keg Creek intake are 1550 gpm

Storage Facilities:
150, 000 gallon elevated tank
600, 000 gallon steel ground storage reservoir (standpipe)
75, 000 gallon steel ground storage reservoir at the packing plant
325, 000 gallon steel ground storage reservoir at the packing plant
6 Underground reservoirs (650, 000 gallons total) at the State School
350, 000 gallon elevated tank at the State School
2, 150, 000 gallons total storage

Treatment Purpose: Keg Creek Treatment Plant
Purification, Disinfection, Softening
Pacific Junction Well Field Plant
softening, iron, manganese removal, disinfection

Treatment Processes: Keg Creek Treatment Plant
Aeration, chlorination, softening with lime, coagulation with alum, taste and odor control with activated carbon, sedimentation in an open basin, mechanical mixing, gravity filtration, chlorination, fluoridation with hydrofluosilicic acid.

Pacific Junction well field treatment plant
Aeration, chlorination, softening with lime, coagulation with alum, mechanical mixing, re-carbonation, gravity filtration.

Chemicals Used in Treatment Processes:
Keg Creek Treatment Plant
Chlorine, lime, alum, hydrofluosilicic acid,
Pacific Junction well field treatment plant
Chlorine, lime, alum

Treatment Capacity:
Keg Creek Treatment Plant - 1.0 MGD
Pacific Junction Treatment Plant - 0.72 MGD

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	N03	Cl	S04	Na
Raw	8.0	370	0.11	.05	.25	256	284	66	23	8	4	12
Finished	7.7	368	0.05	.11	.25	270	302	76	53	13	54	13

The finished water exceeds U.S.P.H.S. recommended limits for manganese and nitrates. The water is also high in total hardness. Raw and finished samples taken on different dates, source in use not available.

Water Demand:

	Present	1995	2020
Population Served	4,421	6,800[1]	8,892[1]
Average Day Use -GPD	1,266,300	-	-
Maximum Day Use - GPD	1,855,000	-	-
GPCD	302 (140 Domestic)	-	-

Projected Daily Usages[1]

	City		State School		Packer & Industry		Total	
Year	Avg. Day GPD	Max. Day GPD	Avg. Day GPD	Max. Day GPD	Avg. Day GPD	Max. Day GPD	Avg. Day GPD	Max. Day GPD
1970	491,300	720,000	100,000	135,000	675,000	1,000,000	1,266,300	1855,000
1980	600,000	1,200,000	125,000	180,000	1,150,000	1,725,000	1,275,000	3105,000
1990	800,000	1,600,000	150,000	225,000	1,650,000	2,500,000	2,600,000	4325,000
2000	1,130,000	2,200,000	200,000	300,000	2,000,000	3,000,000	3,330,000	5500,000

Industrial Users: The only large industrial user is Swift and Co. (675,000 gpd)

Commercial Users: The largest commercial users are the State School (100,000 gpd) and a laundry (50,000 - 80,000 gpd)

Residential Users: NA

Water Rates: NA

Recommended Improvements

Immediate

1) Construction of a 650,000 gallon steel tank
2) Addition of a 1600 gpm pumping station near the 650,000 gallon tank.

Future

1) Abandonment of the Keg Creek Treatment Plant as a source of water.

2) Expansion of the Pacific Junction Plant to a capacity of 3.45 mgd in 1983 and further expansion to 5.5 mgd in 1998.

3) Addition of high service pumps at the Pacific Junction Plant to expand total pump capacity to 2500 gpm with the first plant addition and 3800 gpm with the second plant addition.

4) Addition of a 240 gpm pump at the north pumping station.

5) Addition of 1000 gpm pumping station near the State School.

6) Construction of a 300,000 gallon elevated tank

7) Addition of distribution lines to loop the system and eliminate dead-ends.

Additional Sources of Information:

Kirkham, Michael & Associates, Omaha, Nebraska, Water Distribution System Study and Report, Glenwood, Iowa, 1971.

[1] Kirkham, Michael & Associates, Omaha, Nebraska, Water Procurement, Treatment and Transmission Facilities Study and Report, Glenwood, Iowa, 1968.

EXISTING FACILITIES SUMMARY

Municipality: Hastings, Iowa
Type of Water System: Municipal
Water System Governing Body: City Council
Water Supply Source: 1 Gravel Packed Well

Water Supply Source Capacity:

Well	Depth	Capacity
#1	53'	50 gpm

Storage Facilities: 30,000 gallon standpipe

Treatment Purpose: Iron and manganese removal

Treatment Processes: Oxidation with potassium permanganate, pressure filtration in catalytic mineral

Chemicals Used in Treatment Processes: Potassium permanganate solution

Treatment Capacity: NA

Water Quality:

	pH	TS	FE	Mn	F	ALK	Hard	Ca	NO_3	Cl	SO_4	Na
Well #1	6.8	390	.07	<.05	.2	244	312	84.8	16	14	67	12

The municipal well water meets U.S.P.H.S. recommended limits. The water is, however, high in total hardness.

Water Demand:

	Present	1995	2020
Population Served	229	130	85
Average Day Use -GPD	30,000	-	-
Maximum Day Use -GPD	60,000	-	-
GPCD	- -	-	-

Industrial Users: None

Commercial Users: NA

Residential Users: NA

Water Rates:

First	2,000 gallons	@	$4.25*
Next	3,000 gallons	@	$0.75/1000 gallons*
Over	5,000 gallons	@	$0.50/1000 gallons*

*1965 data

Recommended Improvements:

Immediate

1) Addition of another well and pump as a secondary source of supply.

Future

1) Extension of service to developing areas.
2) Changes in treatment (if required)

EXISTING FACILITIES SUMMARY

Municipality: Henderson, Iowa
Type of Water System: Municipal
Water System Governing Body: City Council
Water Supply Source: 1 gravel packed well

Water Supply Source Capacity:

Well	Depth	Capacity
#1	66'	40 gpm

Storage Facilities: 30,000 gallon standpipe

Treatment Purpose: None

Treatment Processes: None

Chemicals Used in
Treatment Processes: None

Treatment Capacity: None

Water Quality:

	pH	TS	FE	Mn	F	ALK	Hard	Ca	NO_3	Cl	SO_4	Na
Well #1	6.8	395	.05	<.01	.35	240	296	78.4	38	11	37	12

The municipal well water meets U.S.P.H.S. recommended limits, but is high in total hardness.

Water Demand:

	Present	1995	2020
Population Served	211	190	170
Average Day Use -GPD	20,000	-	-
Maximum Day Use -GPD	40,000	-	-
GPCD	-	-	-

Industrial Users: None

Commercial Users: The large commercial users are a fertilizer company, feed and grain company, a car wash, and a locker.

Residential Users: Approximately 95% of the total water use is by residential users.

Water Rates: $4.00 minimum charge
$4.00/1000 gallons

Recommended Improvements:

<u>Immediate</u>

1) Addition of distribution lines to loop the system.

2) Addition of another well and pump as a secondary source of supply.

<u>Future</u> - Secondary source of supply

1) Extension of service to developing areas

2) Addition of treatment, if necessary

Additional Sources of Information: - Questionnaire returned by the City or Town.

AD-A041 937 ARMY ENGINEER DISTRICT OMAHA NEBR F/G 8/6
WATER AND RELATED LAND RESOURCES MANAGEMENT STUDY. VOLUME V. SU--ETC(U)
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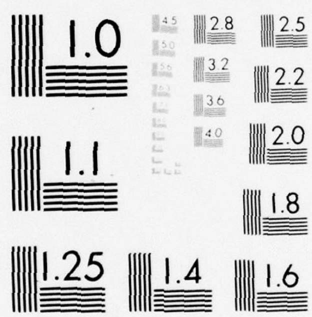

MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

EXISTING FACILITIES SUMMARY

Municipality: Malvern, Iowa
Type of Water System: Municipal
Water System Governing Body: City Council
Water Supply Source: 8 gravel packed wells

Water Supply Source Capacity:

Well	Depth	Capacity
#1	34'	60 gpm
#2	33'	45 gpm
#3	34'	30 gpm
#4	36'	45 gpm
#5	38'	35 gpm
#6	35'	35 gpm
#7	34'	25 gpm
#8	36'	25 gpm
	Total	300 gpm

Storage Facilities: 65,000 gallon elevated tank

Treatment Purpose: Iron - manganese removal, disinfection

Treatment Processes: Aeration, filtration, disinfection

Chemicals used in Treatment Processes: Chlorine (2500 lbs/year)

Treatment Capacity 173.6 gpm

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	NO_3	Cl	SO_4	Na
Well #1	7.1	494	1.4	.61	.25	274	338	110	2.2	33	110	15
Well #2	7.1	592	1.2	.37	.20	232	448	120	7.5	68	140	12
Well #3	7.1	505	4.2	.66	.25	286	396	110	0.2	29	110	16
Well #4	7.25	482	3.6	.52	.20	340	396	110	0.2	14	75	14
Well #5	6.9	547	3.1	2.0	.20	368	452	130	0.4	17	90	12
Well #6	7.0	479	5.3	1.8	.20	332	396	110	0.4	8	85	12
Well #7	7.05	502	2.5	1.9	.25	272	400	120	0.4	12	130	10
Well #8	7.15	442	3.4	2.4	.25	262	356	100	0.4	18	98	12

Wells #2, #3, #5 and #7 exceed U.S.P.H.S. recommended limits for total solids. All the wells exceed iron and manganese recommended limits and is high in total hardness.

Water Demand:

	Present	1995	2020
Population Served	1,158	1,026	896
Average Day Use -GPD	115,000	-	-
Maximum Day Use-GPD	166,000	-	-
GPCD	-	-	-

Industrial Users: Henningson Food Inc. has a private well source (40,000 gpd) and obtains some water from the city (52,000 gpd)

Commercial Users: The largest commercial users in 1973 were a laundromat (701,190 gal/yr., a car wash (300,000 gal/yr.), and a swimming pool (700,000 gal/yr.).

Residential Users: Approximately 50% of the total water usage is by residential users.

Water Rates:

First	4,000 gallons @	$4.00
Next	6,000 gallons @	$0.80/1000 gallons
Next	5,000 gallons @	$0.75/1000 gallons
Next	10,000 gallons @	$0.60/1000 gallons
Next	25,000 gallons @	$0.40/1000 gallons
Next	50,000 gallons @	$0.40/1000 gallons
Over	100,000 gallons @	$0.25/1000 gallons

Recommended Improvements:

Immediate

1) Addition of more storage facilities
2) Addition of a new well

Future

1) Extension of service to developing areas
2) Changes in treatment (if required)

Additional Information Sources: Kirkham, Michael & Associates, Omaha, Nebraska. Municipal Water System Study and Report, Malvern, Iowa, 1967.

Questionnaire returned by the City or Town.

EXISTING FACILITIES SUMMARY

Municipality: Pacific Junction , Iowa
Type of Water: Private
Water System Governing Body:
Water Supply Source: Private Wells

Water Supply Source Capacity: Fire protection provided by tank trucks. Individual wells are shallow, with small capacities.

Storage Facilities: None

Treatment Purpose: None (Individual homes have water softeners).

Treatment Processes: None

Chemicals Used in Treatment Processes: None

Treatment Capacity: None

Water Quality:

pH	TS	Fe	Mn	F	ALK	Hard	Ca	NO_3	Cl	SO_4	Na
7.5	682	13.0	0.4		366	370	102		20	34	27

Water quality data is based on the water analysis for well no. 2 at the Glenwood State School. The well water in the area exceeds U.S.P.H.S. recommended limits for total solids, iron, manganese and is high in total hardness.

Water Demand:

	Present	1995	2020
Population Served	498	449	393
Average Day Use - GPD	-	-	-
Maximum Day Use - GPD	-	-	-
GPCD	70*	-	-
	*1967 data		

Industrial Users: Chicago, Burlington and Quincy Railroads have developed a private supply system. There are no other industrial users.

Commercial Users: NA

Residential Users: NA

Water Rates: *(Proposed-1967) First 1000 gallons @ $2.00
Next 1000 gallons @ $1.00
Next 3000 gallons @ $0.75/1000 gal.
Next 10,000 gallons @ $ 0.65/1000 gal.
Next 10,000 gallons @ $0.50/1000 gal.
All over 25,000 gallons @ $0.40/1000 gal.
*based on monthly billing period.

Recommended Improvements;

Immediate

1) Construction of public water supply system
2) Construction of a 100,000 gallon elevated tank

Future

3) Purchase of water from Glenwood Water Department
3) Extension of service to developing areas

Additional Sources of Information:

Kirkham, Michael & Associates, Omaha, Nebraska. Municipal Water System Study and Report, Pacific Junction, Iowa, 1967.

EXISTING FACILITIES SUMMARY

Municipality: Silver City, Iowa
Type of Water System: Municipal
Water System Governing Body: City Council
Water Supply Source: 2 gravel packed wells

Water Supply Source Capacity:

Well	Depth	Capacity
#1	60'	48 - 60 gpm
#2	55'	49 - 140 gpm
	Total =	97 - 200 gpm

Storage Facilities: 25,000 gallon standpipe

Treatment Purpose: Iron-manganese removal, softening, disinfection

Treatment Processes: Disinfection with hypochlorite, pressure filtration

Chemicals Used in Treatment Processes: Hypochlorite, hexametaphosphate, soda ash

Treatment Capacity: NA

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	N03	Cl	SO_4	Na
Well #1	7.15	603	4.5	.60	.25	269	473	139	.5	88	130	16
Well #2	7.2	694	6.5	.66	.25	290	533	153	.5	92	150	16
Finished	6.95	678	1.2	<.01	.25	280	72	15	<.01	100	130	210

The finished water exceeds U.S.P.H.S. recommended limits for total solids and iron.

Water Demand:

	Present	1995	2020
Population Served	272	223	174
Average Day Use -GPD	30,000	-	-
Maximum Day Use -GPD	60,000	-	-
GPCD	-	-	-

Industrial Users: None

Commercial Users: NA

Residential Users: NA

Water Rates: $4.75 per customer/month ($7.75/month proposed)

Immediate

1)	Addition of more distribution lines to loop the system
2)	Addition of a deep well to improve water quality.

Future

1)	Improvement and expansion of the treatment plant
2)	Addition of pumps to increase treatment capacity to 100 gpm
3)	Addition of a 100,000 gallon elevated tank.

EXISTING FACILITIES SUMMARY

Municipality: Tabor, Iowa
Type of Water System: Municipal
Water System Governing Body: City Council
Water Supply Source: 2 gravel packed wells

Water Supply Source Capacity:

Well	Depth	Capacity
Well #1	62'	150 gpm
Well #2	60'	150 gpm
		300 gpm

Storage Facilities:
85,000 gallon surface reservoir
14,000 gallon pressure tank
15,000 gallon pressure tank
114,000 gallons total storage

Treatment Purpose: Disinfection
Treatment Processes: Chlorination

Chemicals Used in
Treatment Processes: Chlorine

Treatment Capacity: NA

Water Quality:

	pH	TS	Fe	Mn	F	ALF	Hard.	Ca	NO_3	Cl	SO_4	Na
Well #1	7.0	340	.08	.08	.3	250	272	75.2	7.8	2	43	11
Well #2	6.9	337	.22	.06	.3	266	276	75.2	<.01	2	41	11

The municipal well water exceeds U.S.P.H.S. recommended limits for manganese and is high in total hardness.

Water Demand:

	Present	1995	2020
Population Served	957	1067	1177
Average Day Use -GPD	100,000	-	-
Maximum Day Use -GPD	200,000	-	-
GPCD	80 @ pop = 909	-	-

Industrial Users: NA

Commercial Users: NA

Residential Users: NA

Water Rates: First 3000 gallons @ $4.50
Next 2000 gallons @ $1.00/1000 gal.
Next 5000 gallons @ $0.75/1000 gal.
Over 10,000 gallons @ $0.50/1000 gal.

Recommended Improvements:

Immediate

1) Construction of additional storage facilities
2) Elimination of dead end lines by looping them into the system

Future

1) Extension of service to developing areas
2) Changes in treatment (if required)

EXISTING FACILITIES SUMMARY

Municipality: Avoca, Iowa
Type of Water: Municipal
Water System Governing Body: Board of Trustees
Water Supply Source: 3 gravel packed wells

Water Supply Source Capacity:

Well	Depth	Capacity
#1	36.5'	-
#2	37.5	-
#3	37.5	-
	Total =	540 gpm

Storage Facilities:

50,000 gallon underground storage reservoir
100,000 gallon elevated storage tank
150,000 gallons total storage.

Treatment Purpose: Iron and manganese removal, softening, disinfection, flouridation.

Treatment Processes: Aeration, chemical additions for softening and coagulation, mechanical mixing, sedimentation, recarbonation, filtration, disinfection, and fluoridation.

Chemicals Used in Treatment Processes: Lime, alum, soda ash, chlorine gas (3.0 lb/day), and hydro fluosilicic acid

Treatment Capacity: 0.73 MGD, backwash included

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	NO_3	Cl	SO_4	Na
Well #1	6.5	809	2.9	.89	.25	326-	600	164	1.8	35	280	27
Well #2	6.7	731	3.5	4.20	.25	300	540	156	1.6	35	240	22
Well #3	6.65	755	6.2	4.30	.25	306	570	156	6.0	41	260	27
Plant Effluent	6.95	456	.02	.02	.01	NA	232	64	5.0	41	230	38

The finished water meets U.S.P.H.S. recommended limits although it is high in total solids and sulfates.

Water Demand: *

	Present	1995	2020
Population Served	1535	1449	1387
Average Day Use - GPD	260,000	-	-
Maximum Day Use - GPD	380,000	-	-
GPCD	244	-	-

*Municipal Records indicate a high loss rate from the system. Over 94 million gallons of water were treated and pumped to the distribution system, but sales records indicate that 60 million gallons of this water were unaccounted for.

Industrial Users: NA

Commercial Users: NA

Residential Users: NA

Water Rates: NA

Recommended Improvements:

Immediate

1) Addition of more effective water stabilization & backwashing equip.
2) Construction of lime sludge lagoons
3) Construction of a 250,000 gallon steel reservoir.
4) Extension of existing water mains to areas under consideration for future development.
5) Determination of leakage in order to reduce water losses.

Additional Sources of Information:

Kirkham, Michael & Associates, Municipal Water Supply System Program Report for Avoca, Iowa, 1971

EXISTING FACILITIES SUMMARY

Municipality: Carson, Iowa
Type of Water: Municipal
Water System Governing Body: City Council
Water Supply Source: 3 gravel packed wells

Water Supply Source Capacity:

Well	Depth	Capacity
ast Well	27'	-
Well #1	22'	-
Well #2	28'	-
	Total =	100 -170 gpm

Storage Facilities: 33,000 gallon elevated tank

Treatment Purpose: Iron and manganese removal, disinfection

Treatment Processes: Aeration, pressure filtration, disinfection with hypochlorite

Chemicals Used in Treatment Processes: Hypochlorite (40 gpd)

Treatment Capacity: 95 gpm

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	NO_3	Cl	SO_4	Na
Fastwell	6.8	363	0.40	0.48	0.3	300	310	88	1.1	2	36	8.6
Well #1	6.8	·382	0.52	0.56	0.3	292	324	92	0.9	2	58	10
Well #2	7.0	385	1.1	0.24	0.35	308	340	96	2.1	2	52	9.4
Finished	7.35	372	0.06	<0.01	0.35	289	324	92	1.2	65	49	10

The finished water quality meets U.S.P.H.S. recommended limits, but is high in total hardness.

Water Demand:

	Present	1995	2020
Population Served	756	900	912
Average Day Use -GPD	100,000	130,500	-
Maximum Day Use-GPD	-	-	-
GPCD	120	-	-

Industrial Users: There are no major industrial users.

Commercial Users: NA

Residential Users: NA

Water Rates: NA

Recommended Improvements:

Immediate:

1) Construction of additional storage facilities

2) Expansion of treatment plant capacity and addition of softening

Future

3) Addition of more wells to eliminate summer water shortages.

EXISTING FACILITIES SUMMARY

Municipality: Crescent, Iowa
Type of Water System: Municipal
Water System Governing Body:
Water Supply Source: 1 gravel packed well

Water Supply Source Capacity:

Well	Depth	Capacity
#1	148'	100 gpm

Storage Facilities: 50,000 gallon steel ground reservoir

Treatment Purpose: Disinfection

Treatment Processes: Hypochlorite addition

Chemicals Used in Treatment Processes: Hypochlorite ($68/year)

Treatment Capacity: NA

Water Quality:

	pH	TS	FE	Mn	F	ALK	Hard	Ca	NO_3	Cl	SO_4	Na
Well #1	7.3	1470	.12	.15	2.6	192	600	152	.2	120	710	220

The municipal well water exceeds U.S.P.H.S. recommended limits for total solids, manganese, fluoride, sulfate and is also high in total hardnes

Water Demand:

	Present	1990	2020
Population Served	284	410	560
Average Day Use -GPD	16,000-20,000	-	-
Maximum Day Use -GPD	63,000	-	-
GPCD	70	-	-

Industrial Users: None

Commercial Users: Large commercial users consume approximately 10,000 gallons per month.

Residential Users: Approximately 90% of the total water usage is by residential users.

Water Rates:

First 3,000 gallons @ $6.75
Next 2,000 gallons @ $2.00
Next 5,000 gallons @ $0.75/1000 gallons
Next 90,000 gallons @ $0.50/1000 gallons

Recommended Improvements:

Immediate - No immediate needs.

Future - Addition of treatment facilities for iron-manganese and hardness removal.

Additional Sources of Information:

Questionnaire returned by the City of Town.

EXISTING FACILITIES SUMMARY

Municipality: Hancock, Iowa
Type of Water: Municipal
Water System Governing Body: City Council
Water Supply Source: 4 gravel packed wells

Water Supply Source Capacity:

Well	Depth	Capacity
#1	34'	90 gpm
#2	34'	90 gpm
#3		90 gpm
#4		90 gpm
	Total =	360 gpm

Storage Facilities: 40,000 gallon ground reservoir

Treatment Purpose: None

Treatment Processes: None

Chemicals Used in Treatment Processes: None

Treatment Capacity: None

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	NO_3	Cl	SO_4	Na
Well #1	6.65	516	0.04	0.05	0.25	302	420	116	21	22	88	13
Well #2	6.6	635	0.3	0.11	0.25	328	510	140	9.0	38	150	15

The municipal well water exceeds U.S.P.H.S. recommended limits for total solids and is high in total hardness.
Well #2 exceeds recommended limits for manganese.

Water Demand:

	Present	1995	2020
Population Served	228	270	280
Average Day Use -GPD	20,000	-	-
Maximum Day Use -GPD	34,000	-	-
GPCD	53	-	-

Industrial Users: NA

Commercial Users: NA

Residential Users: NA

Water Rates: NA

Recommended Improvements:

Immediate

1) Installation of meters at all water connections
2) Addition of treatment facilities for softening and disinfection

Future:

1) Abandonment of Well #1 and Well #2
2) Construction of a 50,000 gallon elevated tank
3) Extension of the distribution system outside the corporate limits of town.

EXISTING FACILITIES SUMMARY

Municipality: Macedonia, Iowa
Type of Water System: Municipal
Water System Governing Body: City Council
Water Supply Source: 2 gravel packed wells

Water Supply Source Capacity:

Well	Depth	Capacity
#1	36'	70 gpm
#2	36'	70 gpm
	Total =	140 gpm

Storage Facilities: 30,000 gallon elevated tank

Treatment Purpose: None

Treatment Processes: None

Chemicals Used in Treatment Processes: None

Treatment Capacity: None

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	N03	Cl	SO_4	Na
Well #1	7.0	484	<.02	<.05	.50	248	373	106	7.1	5	130	17
Well #2	6.75	709	.05	<.05	.35	369	590	160	4.1	4.5	230	12

Well #2 exceeds U.S.P.H.S. recommended limits for total solids. Both wells are high in total hardness.

Water Demand:

	Present	1995	2000	2020
Population Served	330	435	-	470
Average Day Use -GPD	30,000	-	40,000	-
Maximum Day Use -GPD	-	-	-	-
GPCD	52	100	-	-

Industrial Users: None

Commercial Users: The largest commercial user is a car wash (34,840 gallons/quarter)

Residential Users: Approximately 90% of the total water usage is by residential users.

Water Rates:		
	First	3,000 gallons @ $1.00/1000 gallons
	Next	17,000 gallons @ $0.80/1000 gallons
	Over	20,000 gallons @ $0.70/1000 gallons

Recommended Improvements:

Immediate

1) Construction of additional storage facilities
2) Addition of treatment facilities for softening and disinfection
3) Extension of the distribution system to the corporate limits of town.

Additional Sources of Information

Questionnaire returned by the City or Town.

EXISTING FACILITIES SUMMARY

Municipality: McClelland, Iowa
Type of Water System: Private
Water System Governing Body: None
Water Supply Source: Approximately 140 private wells.

Water Supply Source Capacity: Individual wells are shallow with small capacities.

Storage Facilities: None

Treatment Purpose: None

Treatment Processes: None

Chemicals Used in Treatment Processes: None

Treatment Capacity: None

Water Quality:

pH	TS	FE	Mn	F	ALK	Hard	Ca	NO_3	Cl	SO_4	Na

Water Demand:

	Present	1995	2020
Population Served	146	150	156
Average Day Use -GPD	12,000	-	-
Maximum Day Use -GPD	24,000	-	-
GPCD	-	-	-

Industrial Users: None

Commercial Users: NA

Residential Users: NA

Recommended Improvements:

Immediate

1) Construction of a public water supply system
2) Addition of treatment facilities to remove hardness

EXISTING FACILITIES SUMMARY

Municipality: Minden , Iowa
Type of Water: Municipal
Water System Governing Body: City Council
Water Supply Source: 8 gravel packed wells (2 wells operational only in the spring)

Water Supply Source Capacity:

Well	Depth	Capacity
Well #1		10-20 gpm
Well #2		10-20 gpm
Well #3		10-20 gpm
Well #4		10-20 gpm
Well #5		10-20 gpm
Well #6		10-20 gpm
Well #7		10-20 gpm
Well #8		10-20 gpm
	Total	80-160 gpm

Storage Facilities: 46, 600 gallon standpipe

Treatment Purpose: Iron and manganese removal, softening, disinfection

Treatment Processes: Aeration, coagulation with alum and soda ash, sedimentation, pressure filtration, disinfection with hypochlorite

Chemicals Used in Treatment Processes: Alum, soda ash, hypochlorite

Treatment Capacity: 35 gpm

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	NO_3	Cl	SO_4	Na
Well #2	7.15	406	<.02	<.05	.25	292	360	97.6	31	17	57	12
Well #3	7.0	423	2.3	0.48	.25	322	360	101	0.7	48	29	17
Finished	7.5	427	0.3	0.09	.25	316	318	99.2	28	26	28	26

The finished water exceeds U.S.P.H.S. recommended limits for manganese and is high in total hardness.

Water Demand:

	Present	1995	2020
Population Served	433	525	540
Average Day Use -GPD	-	65,625	-
Maximum Day Use -GPD	-	-	-
GPCD	100	-	-

Industrial Users: NA

Commercial Users: NA

Residential Users: NA

Water Rates:

Recommended Improvements:

Immediate
1) Addition of another well
2) Construction of additional storage facilities

Future
1) Development of a well field with higher capacity

EXISTING FACILITIES SUMMARY

Municipality: Neola, Iowa
Type of Water: Municipal
Water System Governing Body: City Council
Water Supply Source: 3 gravel packed wells

Water Supply Source Capacity:

Well	Depth	Capacity
#2	83'	75 gpm
#3	41'	85 gpm
#4	120'	100 gpm
	Total =	260 gpm

Storage Facilities: 85,000 gallon elevated tank

Treatment Purpose: Disinfection

Treatment Processes: Chlorination

Chemicals Used in Treatment Processes: Chlorine

Treatment Capacity: NA

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	NO_3	Cl	SO_4	Na
Well #2	7.1	875	.04	0.34-	0.2	376	640	168	73	56	170	32
Well #3	7.1	704	<.02	1.1	0.3	364	520	144	36	37	140	31
Well #4	7.05	463	0.96	1.2	0.25	326	384	106	0.5	3	83	12

The municipal well water exceeds U.S.P.H.S. recommended limits for total solids in Well #2 & 3, iron in Well #4, manganese in wells #2, #3 & #4, nitrates in well #2 and is also high in total hardness.

Water Demand:

	Present	1995	2020
Population Served	968	1200	1395
Average Day Use - GPD	100,000	162,000	-
Maximum Day Use - GPD	200,000	-	-
GPCD	104	-	-

Industrial Users: NA

Commercial Users: NA

Residential Users: NA

Water Rates: NA

Recommended Improvements:

Immediate

1) Additions of treatment facilities for manganese removal and hardness removal
2) Construction of additional storage facilities.

Future

2) Addition of another well.

EXISTING FACILITIES SUMMARY

Municipality: Oakland, Iowa
Type of Water: Municipal
Water System Governing Body: City Council
Water Supply Source: 5 gravel packed wells

Water Supply Source Capacity:

Well	Depth	Capacity
#64-5	33'	75 gpm
#69-6	27'	50 gpm
#71-7	30'	100 gpm
#72-1	30'	70 gpm
#3	1932'	80 gpm
	Total =	375 gpm

Storage Facilities: 160,000 gallon concrete ground reservoir
40,000 gallon elevated storage tank
200,000 gallons total storage

Treatment Purpose: Disinfection

Treatment Processes: Chlorination

Chemicals Used in Treatment Processes: Chlorine

Treatment Capacity: NA

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	NO_3	Cl	SO_4	Na
Well #39-1	6.8	351	0.8	.47	.35	250	288	76.8	.1	11	50	10.0
Well #64-5	6.85	383	1.5	.57	.3	346	324	91.2	.7	5	60	9.5
Well #69-6	6.80	480	2.6	.46	.35	339	388	115	.2	13	110	11
Well #71-7	6.90	413	2.2	.38	.35	386	352	94.4	.01	2	48	9.6
Well #3	7.4	1540	.64	<05	4.4	339	337	77.2	.5	140	670	380

All the wells exceed suggested U.S.P.H.S. recommended limits for iron and manganese and are high in total hardness. Well No. 3 also exceeds recommended limits for total solids and fluorine.

Water Demand:

	Present	1985	1995	2020
Population Served	1603	2,074	1,820	2,060
Average Day Use -GPD	218,000	282,000	-	-
Maximum Day Use -GPD	400,000	519,000	-	-
GPCD	136	136	-	-

Industrial Users: The major industries are a beef processing plant and a trucking firm.

Commercial Users: NA

Residential Users: NA

Water Rates:

First	10,000 gallons @ $1.50/1000 gal.
Next	10,000 gallons @ $1.30/1000 gal.
Next	10,000 gallons @ $1.00/1000 gal.
Next	20,000 gallons @ $0.80/1000 gal.
Over	50,000 gallons @ $0.60/1000 gal.

Monthly Billing Period

Recommendations:

Immediate:

1) Addition of a 250,000 gallon elevated tank
2) Elimination of existing elevated tank and booster pump station
3) Addition of at least one new high service pump and rebuild existing pump to accommodate higher pumping heads.
4) Addition of a treatment plant for iron and manganese removal and partial softening.

Future

1) Addition of distribution piping to loop the system
2) Replacement of worn fire hydrants, valves and meters as necessary.

Additional Sources of Information

DeWild Grant Reckert & Associates, Rock Rapids, Iowa and Bresler and Associates, New York, N.Y. Economic Feasibility of Desalting Systems for municipal water supply in Iowa, 1974.

EXISTING FACILITIES SUMMARY

Municipality: Treynor, Iowa
Type of Water System: Municipal
Water System Governing Body: City Council
Water Supply Source: 2 gravel packed wells

Water Supply Source Capacity:

Well	Depth	Capacity
#1	235'	135 gpm
#2	135'	125 gpm
	Total =	260 gpm

Storage Facilities: 20,000 gallon elevated tank

Treatment Purpose: None

Treatment Processes: None

Chemicals Used in
Treatment Processes: None

Treatment Capacity: None

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	N03	Cl	SO_4	Na
Well #1	7.4	352	.67	.12	.2	324	308	88	1.8	2	47	26
Well #2	7.4	376	.66	.22	.2	336	288	82	8.5	3	30	27

The municipal wells exceed U.S.P.H.S. recommended limits for iron and manganese and is also high in total hardness.

Water Demand:

	Present	1995	2020
Population Served	472	1350	1929
Average Day Use -GPD	75,000	-	-
Maximum Day Use -GPD	130,000	-	-
GPCD	109	-	-

Industrial Users: None

Commercial Users: The large commercial users are a laundromat, a car wash, a locker, and two schools.

Residential Users: Most of the consumption in the summer is by residential customers.

Water Rates:

First	1,000 gallons @ $3.50	
Next	2,000 gallons @ $0.75/1000 gallons	
Next	5,000 gallons @ $0.40/1000 gallons	
Next	5,000 gallons @ $0.30/1000 gallons	
Over	13,000 gallons @ $0.20/1000 gallons	

Recommended Improvements:

Immediate:

1) Construction of additional storage facilities
2) Addition of treatment facilities for hardness and manganese removal and chlorination
3) Enlargement of distribution mains

Future

1) Consideration of enlargement of the service area outside the corporate limits
2) Addition of another well

Additional Sources of Information

Questionnaire returned by the City or Town

EXISTING FACILITIES SUMMARY

Municipality: Underwood, Iowa
Type of Water System: Municipal
Water System Governing Body: City Council
Water Supply Source: 2 gravel packed wells

Water Supply Source Capacity:

Well	Depth	Capacity
No. Well	50'	20 gpm
So. Well	50'	50 gpm
	Total =	70 gpm

Storage Facilities: 30,000 gallon elevated tank

Treatment Purpose: None

Treatment Processes: None

Chemicals Used in Treatment Processes: None

Treatment Capacity: None

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	N03	Cl	SO_4	Na
No. Well	6.8	527	0.02	1.6	0.25	444	470	120	8.2	7	41	15
So. Well	6.6	326	0.02	0.01	0.25	270	280	74	20	2	21	11

The north well exceeds U.S.P.H.S. recommended limits for total solids, manganese and is high in total hardness. The south well meets U.S.P.H.S. standards, but is also high in total hardness.

Water Demand:

	Present	1995	2020
Population Served	424	820	1028
Average Day Use -GPD	-	110,700	-
Maximum Day Use -GPD	-	-	-
GPCD	110	-	-

Industrial Users: NA

Commercial Users: NA

Residential Users: NA

Water Rates: NA

Recommended Improvements:

Immediate

1) Increase well capacity by 200 gpm
2) Provide chlorination
3) Increase the storage capacity

Future

1) Enlargement of the service area to include outlying areas.

EXISTING FACILITIES SUMMARY

Municipality: Walnut, Iowa
Type of Water System: Municipal
Water System Governing Body: Board of Trustees
Water Supply Source: 2 drilled deep wells

Water Supply Source Capacity:

Well	Depth	Capacity
#1	2,511 ft.	230 gpm
#2	327 ft.	140 gpm
	Total =	370 gpm

Storage Facilities: 50,000 elevated tank

Treatment Purpose: Iron and manganese removal, disinfection

Treatment Processes: Aeration, pressure filtration, disinfection with hypochlorite

Chemicals Used in Treatment Processes: Hypochlorite

Treatment Capacity: 175 gpm

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	N03	Cl	SO_4	Na
Well #1	7.3	1630	1.1	.01	2.6	172	690	160	.8	220	740	210
Well #2	7.3	1620	1.2	.02	2.6	174	720	190	.4	240	740	210
Finished Water	7.6	1610	.09	.01	2.6	164	690	160	.5	220	740	210

The finished water exceeds U.S.P.H. recommended limits for fluoride, total solids and sulfates. Total hardness is also high.

Water Demand:

	Present	1995	2020
Population Served	870	820	770
Average Day Use -GPD	80-100,000	131,250	-
Maximum Day Use -GPD	150,000	-	-
GPCD	100	-	-

Industrial Users: None

Commercial Users: No large users

Residential Users: Approximately 90% of the total water usage is by residential users.

Water Rates:	First	1,000 gallons @ \$2.50
	Next	2,000 gallons @ \$0.18/100 gallons
	Next	1,000 gallons @ \$0.13/100 gallons
	Next	6,000 gallons @ \$0.60/1000 gallons
	Over	10,000 gallons @ \$0.30/1000 gallons

Recommended Improvements:

Immediate

1) Construction of additional storage facilities
2) Expansion and improvement of the treatment plant
3) Addition of a shallow well to help dilute high fluoride and sulfate concentrations in the existing deep wells.

Additional Sources of Information:

Questionnaire returned by the City or Town

Municipality: Council Bluffs, Iowa

Type of Water System: Municipal

Water System Governing Body: Board of Trustees

Water Supply Source: Missouri River surface intake and well field

Water Supply Source Capacity: River Intake

	13.0	MGD pump
	7.0	MGD pump
	5.5	MGD pump
	5.5	MGD pump
Total =	31.0	MGD pumping capacity

Well Field*

3.0 MGD pumping capacity

*Well water is mixed with river intake water during winter months to prevent freezing of plant units.

Storage Facilities:

2,000,000	gallon concrete reservoir
2,000,000	gallon concrete reservoir
200,000	gallon elevated tank
200,000	gallon elevated tank
4,400,000	gallons total storage

Treatment Purpose: Purification, softening, disinfection

Treatment Process: Presedimentation, chlorination, mechanical mixing, flocculation, sedimentation, fluoridation, taste and odor control, gravity filtration, stabilization.

Chemicals Used in Treatment Process: Lime, soda ash, alum, phosphate, permanganate, activated carbon, chlorine, fluoride, carbon dioxide

Treatment Capacity: 17.0 MGD

Water Quality:

	pH	TS	Fe	Mn	F	ALK	Hard	Ca	NO_3	Cl	SO_4	Na
Well	7.1	925	9.5	0.1	0.48	464	656	178	-	71	300	
River	8.1			<.01		244	336	59		11	210	62
Finished	8.9	399	.02	<.01	0.9	62	112	20	0.4	11	210	74

Water Demand:

	Present	1995	2020
Population served	62,103		
Average day use-GPD	8,390,000		
Maximum day use-GPD	12,315,000		
GPCD	135		

Industrial Users: Approximately 35% of the total water usage is by five major industries.

Commercial Users: Approximately 21% of the total water usage is by commercial and small industrial users.

Residential Users: Approximately 44% of the total water usage is by residential users.

Water Rates: First 300 cubic feet @ \$0.975/100 cu. ft.
Next 700 cubic feet @ \$0.66/100 cu. ft.
Next 49,000 cubic feet @ \$0.52/100 cu. ft.
Next 150,000 cubic feet @ \$0.35/100 cu. ft.
Over 200,000 cubic feet @ \$0.18/100 cu. ft.
Monthly Billing Period

Recommended Improvements:

Immediate

1) Construction of 2.0 MG ground storage tank east of Iowa School for the Deaf.
2) Construction of 200,000 gallon elevated storage tank in east section of system at Crest View Drive.
3) Extension of water mains to loop system and increase pumping capacities.
4) Addition of water treatment plant sludge handling facility.

Future

5) Construction of 1.0 MG elevated storage tank in north sector of system at Grand Avenue.
6) Change pump impellers at Narrows Station to increase pumping capacity.
7) Increase pumping capacity at Glendale Station from 950 gpm to 2000 gpm.
8) Increase pumping capacity at Oak Street Station from 1280 gpm to 2500 gpm.
9) Expansion of water treatment plant.

Additional Sources of Information:

Henningson, Durham & Richardson, Omaha, Nebraska. Water Distribution System Master Plan, Council Bluffs, Iowa, 1972.

Henningson, Durham & Richardson, Omaha, Nebraska. Water Treatment Plant Waste Report, Council Bluffs, Iowa, 1973.

SECTION B

MUNICIPAL AND RURAL WATER USAGE SUMMARY

MUNICIPAL AND RURAL WATER USAGE
SUMMARY

TABLE OF CONTENTS

MUNICIPAL AND RURAL WATER USAGE SUMMARY

This Appendix contains a county by county summary of water usage in each municipality in the study area as well as rural residential water usage. Current (1973) consumptions are from actual records in many communities with estimates made for the remainder. Future (1995 and 2020) consumptions are based upon available engineering and planning studies. Future populations are those supplied by the Corps of Engineers for Growth Concept A except for communities with recent individual water system studies which project different populations. A detailed explanation of water use projections is found in Chapter III of this report.

MUNICIPAL AND RURAL WATER USAGE SUMMARY

CASS COUNTY, NEBRASKA

USER 1973	POPULATION	GPCPD	AVERAGE DAY USE RESIDENTIAL IN HOUSE	RESIDENTIAL OTHER	INDUSTRIAL & COMMERCIAL	TOTAL	MAXIMUM DAY USE
Alvo	150		28.2	7.1	0.7	36.0	72.0
Avoca	238	100	18.2	3.2	2.4	33.8	47.6
Eagle	518	100	39.6	7.0	5.2	51.8	103.6
Elmwood	590	227	96.9	24.1	13.4	234.4	302.4
Greenwood	605	100	46.3	8.2	6.1	60.6	121.0
Louisville	1,009	100	77.2	13.6	10.1	100.9	201.8
Murdock	262	100	20.1	3.5	2.6	26.2	52.4
Murray	304	100	23.3	4.1	3.0	30.4	60.8
Nehawka	319	100	24.4	4.3	3.2	31.9	63.8
Plattsmouth	6,950	108	542.3	95.7	112.6	750.6	1,501.2
Union	275	100	21.1	3.7	2.7	27.5	55.0
Weeping Water	1,175	154	138.5	24.4	17.7	180.6	361.1
Rural & Other	6,397	60	326.0	58.0	-	384.0	768.0
Total County	18,792		1,402.1	256.9	179.7	1,838.7	3,710.7

Average and maximum day usage in thousand gallons per day

MUNICIPAL AND RURAL WATER USAGE SUMMARY

CASS COUNTY, NEBRASKA

USER 1995	POPULATION	GPCPD	AVERAGE DAY USE RESIDENTIAL IN HOUSE	RESIDENTIAL OTHER	INDUSTRIAL & COMMERCIAL	TOTAL	MAXIMUM DAY USE
Alvo	136		28.3	7.0	0.7	36.0	72.0
Avoca	271	122	25.3	4.5	3.3	33.1	66.1
Eagle	778	122	72.6	12.8	9.5	94.9	189.8
Elmwood	757	227	123.8	30.9	17.2	171.8	343.7
Greenwood	868	122	81.0	14.3	10.6	105.9	211.8
Louisville	890	122	83.0	14.7	10.9	108.6	217.2
Murdock	314	122	29.3	5.2	3.8	38.3	76.6
Murray	327	122	30.5	5.4	4.0	39.9	79.8
Nehawka	389	122	36.3	6.4	4.7	47.5	94.9
Plattsmouth	7,684	130	721.7	127.4	149.8	998.9	1,997.8
Union	244	122	22.8	4.0	3.0	29.8	59.5
Weeping Water	1,374	176	185.0	32.6	24.2	241.8	483.6
Rural & Other	6,498	100	550.0	97.1	2.7	649.8	1,299.6
Total County	20,530		1,989.6	362.3	244.4	2,596.3	5,192.4

Average and maximum day usage in thousand gallons per day

MUNICIPAL AND RURAL WATER USAGE SUMMARY

CASS COUNTY, NEBRASKA

USER 2020	POPULATION	GPCPD	AVERAGE DAY USE RESIDENTIAL IN HOUSE	AVERAGE DAY USE RESIDENTIAL OTHER	AVERAGE DAY USE INDUSTRIAL & COMMERCIAL	TOTAL	MAXIMUM DAY USE
Alvo	124		28.3	7.0	0.7	36.0	72.0
Avoca	280	122	26.2	4.6	3.4	34.2	68.3
Eagle	983	122	91.7	16.2	12.0	119.9	239.9
Elmwood	902	227	147.4	36.9	20.5	204.8	409.5
Greenwood	1,097	122	102.3	18.1	13.4	133.8	267.7
Louisville	813	130	80.3	14.7	10.9	105.9	211.8
Murdock	328	122	30.6	5.4	4.0	40.0	80.0
Murray	327	122	30.5	5.4	4.0	39.9	79.8
Nehawka	444	122	41.5	7.3	5.4	54.2	108.3
Plattsmouth	8,035	130	154.7	133.2	156.7	1,044.6	3,089.1
Union	223	134	22.8	4.0	3.0	29.8	59.5
Weeping Water	1,446	176	194.6	34.4	25.5	254.5	509.0
Rural & Other	6,562	100	554.9	97.9	3.4	656.2	1,312.4
Total County	21,564		2,105.8	385.1	262.9	2,753.8	5,507.3

Average and maximum day usage in thousand gallons per day

MUNICIPAL AND RURAL WATER USAGE SUMMARY

DOUGLAS AND SARPY COUNTIES, NEBRASKA

USER 1973	POPULATION	GPCPD	AVERAGE DAY USE: RESIDENTIAL IN HOUSE	AVERAGE DAY USE: RESIDENTIAL OTHER	AVERAGE DAY USE: INDUSTRIAL & COMMERCIAL	AVERAGE DAY USE: TOTAL	MAXIMUM DAY USE
Bellevue (South)	13,000	138	1,372.4	242.2	179.4	1,794.0	358.8
Bennington	750	127	72.8	12.8	9.4	95.0	190.0
Elkhorn	1,390	110	117.0	20.6	15.4	153.0	306.0
Gretna	1,900	100	145.4	25.6	19.0	190.0	380.0
MUD	430,000	178	42,488.0	10,620.0	23,365.0	76,433.0	157,068.0
Offutt A. F. B.	4,950	238	901.1	159.6	117.3	1,178.0	238.8
Springfield	900	110	75.7	13.4	9.9	99.0	198.0
Valley	1,650	116	146.1	25.8	19.1	191.0	382.0
Waterloo	470	116	42.1	7.4	5.5	55.0	110.0
Rural & Other	19,400	60	989.4	174.6	-	1,164.0	2,328.0
Total	474,410		46,310.0	11,302.0	23,740.0	81,352.0	166,938.0

Average and maximum day usage in thousand gallons per day

MUNICIPAL AND RURAL WATER USAGE SUMMARY
DOUGLAS AND SARPY COUNTIES, NEBRASKA

USER 1995	POPULATION	GPCPD	AVERAGE DAY USE RESIDENTIAL IN HOUSE	RESIDENTIAL OTHER	INDUSTRIAL & COMMERCIAL	TOTAL	MAXIMUM DAY USE
Bellevue							
Bennington	2,385	205	374.9	66.1	49.0	490.0	980.0
Elkhorn	2,851	135	294.5	52.0	38.5	385.0	770.0
Gretna	7,365	135	760.4	134.2	99.4	994.0	1,988.0
MUD	711,006	206	77,997.0	19,499.0	48,973.0	146,469.0	327,625.0
Offutt A. F. B.							
Springfield	3,378	150	387.0	68.4	50.7	507.0	1,014.0
Valley	2,555	136	265.5	46.8	34.7	347.0	694.0
Waterloo	545	136	56.6	10.0	7.4	74.0	148.0
Rural & Other	12,153	100	1,033.0	182.3	-	1,215.3	2,430.6
Total	747,238		81,169.8	20,058.8	49,252.7	150,481.3	335,649.6

Average and maximum day usage in thousand gallons per day

MUNICIPAL AND RURAL WATER USAGE SUMMARY
DOUGLAS AND SARPY COUNTIES, NEBRASKA

USER	POPULATION	GPCPD	AVERAGE DAY USE RESIDENTIAL IN HOUSE	AVERAGE DAY USE RESIDENTIAL OTHER	AVERAGE DAY USE INDUSTRIAL & COMMERCIAL	TOTAL	MAXIMUM DAY USE
2020							
Bellevue							
Bennington	3,144	210	504.9	89.1	66.0	660.0	1,320.0
Elkhorn	3,819	135	394.7	69.7	51.6	516.0	1,032.0
Gretna	13,208	135	1,364.0	240.7	178.3	1,783.0	3,566.0
MUD	872,073	231	111,425.5	27,878.3	62,524.2	201,828.0	452,292.0
Offutt A.F.B.							
Springfield	6,362	150	729.8	128.8	95.4	954.0	1,908.0
Valley	3,325	161	409.3	72.2	53.5	535.0	1,070.0
Waterloo	814	161	99.5	17.5	13.0	130.0	270.0
Rural & Other	6,450	100	548.3	96.7	-	645.0	1,290.0
Total	908,987		115,476.0	28,593.0	62,982.0	207,015.0	462,738.0

Average and maximum day usage in thousand gallons per day

MUNICIPAL AND RURAL WATER USAGE SUMMARY

WASHINGTON COUNTY, NEBRASKA

USER 1973	POPULATION	GPCPD	AVERAGE DAY USE RESIDENTIAL IN HOUSE	OTHER	INDUSTRIAL & COMMERCIAL	TOTAL	MAXIMUM DAY USE
Arlington	969	100	74.1	13.1	9.7	96.9	193.8
Blair	6,548	175	876.6	154.7	114.6	1,145.9	2,291.8
Fort Calhoun	739	125	70.7	12.5	9.2	92.4	184.8
Herman	325	102	25.4	4.5	3.3	33.2	66.3
Kennard	335	100	27.9	4.9	0.7	33.5	67.0
Washington	85	100	6.5	1.1	0.9	8.5	17.0
Rural & Other	4,841	60	246.9	43.6	-	290.5	581.0
Total	13,842		1,328.0	234.4	138.4	1,700.9	3,401.7

Average and maximum day usage in thousand gallons per day

MUNICIPAL AND RURAL WATER USAGE SUMMARY

WASHINGTON COUNTY, NEBRASKA

USER 1995	POPULATION	GPCPD	AVERAGE DAY USE RESIDENTIAL IN HOUSE	AVERAGE DAY USE RESIDENTIAL OTHER	AVERAGE DAY USE INDUSTRIAL & COMMERCIAL	AVERAGE DAY USE TOTAL	MAXIMUM DAY USE
Arlington	1,345	122	125.5	22.2	16.4	164.1	328.2
Blair	9,343	197	1,408.0	248.5	184.1	1,840.6	3,681.1
Fort Calhoun	1,353	147	152.0	26.9	19.9	178.9	397.8
Herman	311	124	29.2	5.2	4.2	38.6	77.1
Kennard	341	122	31.3	6.1	4.2	41.6	83.2
Washington	149	122	13.9	2.5	1.8	18.2	36.4
Rural & Other	4,841	100	411.5	72.6	-	484.1	968.2
Total	17,683		2,171.5	384.0	230.6	2,786.1	5,572.0

Average and maximum day usage in thousand gallons per day

MUNICIPAL AND RURAL WATER USAGE SUMMARY

WASHINGTON COUNTY, NEBRASKA

USER 2020	POPULATION	GPCPD	AVERAGE DAY USE: RESIDENTIAL: IN HOUSE	AVERAGE DAY USE: RESIDENTIAL: OTHER	AVERAGE DAY USE: INDUSTRIAL & COMMERCIAL	AVERAGE DAY USE: TOTAL	MAXIMUM DAY USE
Arlington	1,446	122	135.0	23.8	17.6	176.4	352.8
Blair	10,393	197	1,566.3	276.4	204.7	2,047.4	4,094.8
Fort Calhoun	1,708	147	192.1	33.9	25.1	251.1	502.2
Herman	284	135	29.3	5.2	3.8	38.6	74.7
Kennard	311	134	31.4	6.1	4.2	41.7	83.3
Washington	284	122	26.5	4.6	3.5	34.6	69.2
Rural & Other	4,841	100	411.5	72.6	-	484.1	968.2
Total	19,267		2,392.1	422.6	258.0	3,073.9	6,147.6

Average and maximum day usage in thousand gallons per day

MUNICIPAL AND RURAL WATER USAGE SUMMARY

HARRISON COUNTY, IOWA

USER 1973	POPULATION	GPCPD	AVERAGE DAY USE RESIDENTIAL IN HOUSE	AVERAGE DAY USE RESIDENTIAL OTHER	AVERAGE DAY USE INDUSTRIAL & COMMERCIAL	TOTAL	MAXIMUM DAY USE
Dunlap	1,315	93	93.3	16.5	12.2	122.0	292.8
Little Sioux	244	82	15.3	2.7	2.0	20.0	41.8
Logan	1,557	103	108.8	19.2	32.0	160.0	400.0
Magnolia	206	100	15.8	2.8	2.0	20.6	41.2
Missouri Valley	3,568	121	202.0	35.6	194.4	432.0	789.0
Modale	294	119	26.8	4.7	3.5	35.0	91.0
Mondamin	417	168	53.6	9.4	7.0	70.0	183.0
Persia	315	94	22.6	4.0	2.9	29.5	34.0
Pisgah	289	80	17.7	3.1	2.3	23.1	55.5
Woodbine	1,391	96	101.7	18.0	13.3	133.0	319.2
Rural & Other	6,770	60	345.3	60.9	-	406.2	812.4
Total County	16,366		1,002.9	176.9	271.6	1,451.4	3,059.9

Average and maximum day usage in thousand gallons per day

MUNICIPAL AND RURAL WATER USAGE SUMMARY

HARRISON COUNTY, IOWA

USER 1995	POPULATION	GPCPD	AVERAGE DAY USE RESIDENTIAL IN HOUSE	RESIDENTIAL OTHER	INDUSTRIAL & COMMERCIAL	TOTAL	MAXIMUM DAY USE
Dunlap	1,485	115	130.7	23.0	17.1	170.8	409.9
Little Sioux	283	104	22.5	4.0	2.9	29.4	61.8
Logan	1,781	125	151.4	26.7	44.5	222.6	556.6
Magnolia	204	122	19.0	3.4	2.5	24.9	49.8
Missouri Valley	2,930	143	262.7	46.4	252.9	562.0	1,068.0
Modale	275	141	29.7	5.2	3.9	38.8	100.8
Mondamin	395	190	57.4	10.1	7.5	75.0	195.1
Persia	305	116	27.1	4.8	3.5	35.4	70.8
Pisgah	312	102	24.3	4.3	3.2	31.8	76.4
Woodbine	1,700	118	153.5	27.1	20.0	200.6	481.0
Rural & Other	6,770	100	575.6	101.4	-	677.0	1,354.0
Total County	17,440		1,453.9	256.4	358.0	2,068.3	4,424.2

Average and maximum day usage in thousand gallons per day

MUNICIPAL AND RURAL WATER USAGE SUMMARY

HARRISON COUNTY, IOWA

USER 2020	POPULATION	GPCPD	AVERAGE DAY USE RESIDENTIAL IN HOUSE	RESIDENTIAL OTHER	INDUSTRIAL & COMMERCIAL	TOTAL	MAXIMUM DAY USE
Dunlap	1,511	115	133.0	23.5	17.3	173.8	417.70
Little Sioux	283	104	22.5	4.0	2.9	29.4	61.8
Logan	1,844	125	156.7	27.7	46.1	230.5	576.0
Magnolia	180	135	19.0	3.4	2.5	24.9	49.8
Missouri Valley	4,341	143	290.2	51.2	279.4	620.8	1,179.5
Modale	250	155	29.7	5.2	3.9	38.8	100.8
Mondamin	314	238	57.4	10.1	7.5	75.0	195.1
Persia	285	124	27.1	4.8	3.5	35.4	70.8
Pisgah	312	102	24.3	4.3	3.2	31.8	76.4
Woodbine	1,848	118	166.7	29.5	21.8	218.0	523.4
Rural & Other	6,770	100	575.6	101.4	-	677.0	1,354.0
Total County	17,938		1,502.2	265.1	388.1	2,155.4	4,604.6

Average and maximum day usage in thousand gallons per day

MUNICIPAL AND RURAL WATER USAGE SUMMARY

MILLS COUNTY, IOWA

USER 1973	POPULATION	GPCPD	AVERAGE DAY USE RESIDENTIAL IN HOUSE	AVERAGE DAY USE RESIDENTIAL OTHER	AVERAGE DAY USE INDUSTRIAL & COMMERCIAL	TOTAL	MAXIMUM DAY USE
Emerson	495	90	34.1	6.0	4.5	44.6	89.1
Glenwood	4,681	309	430.8	76.0	941.2	1,448.0	2,230.0
Hastings	217	138	23.0	4.0	3.0	30.0	60.0
Hendersen	209	98	16.6	2.9	1.0	20.5	41.0
Malvern	1,142	97	68.8	12.1	29.9	110.8	221.6
Pacific Junction	498	100	38.1	6.1	5.0	49.8	99.6
Silver City	266	110	22.4	4.0	2.9	29.3	58.6
Tabor	970	100	74.2	13.1	9.7	97.0	194.0
Rural & Other	4,280		218.3	38.5	-	256.8	513.6
Total County	12,758		926.3	163.3	997.2	2,086.8	3,507.5

Average and maximum day usage in thousand gallons per day

MUNICIPAL AND RURAL WATER USAGE SUMMARY
MILLS COUNTY, IOWA

USER 1995	POPULATION	GPCPD	AVERAGE DAY USE: RESIDENTIAL IN HOUSE	AVERAGE DAY USE: RESIDENTIAL OTHER	AVERAGE DAY USE: INDUSTRIAL & COMMERCIAL	AVERAGE DAY USE: TOTAL	MAXIMUM DAY USE
Emerson	574	125	54.9	9.7	7.2	71.8	143.5
Glenwood	6,800	436	717.0	127.0	2,121.0	2,965.0	4,912.5
Hastings	130	231	23.0	4.0	3.0	30.0	60.0
Hendersen	190	125	19.2	3.4	1.2	23.8	47.5
Malvern	1,026	125	79.6	14.0	34.7	128.3	256.6
Pacific Junction	449	125	42.9	7.6	5.6	56.1	112.2
Silver City	223	131	22.4	4.0	2.9	29.3	58.6
Tabor	1,067	125	102.1	18.0	13.3	133.4	266.8
Rural & Other	4,280	100	363.8	64.2	-	428.0	856.0
Total County	14,739		1,424.9	251.9	2,188.9	3,865.7	6,713.7

Average and maximum day usage in thousand gallons per day

MUNICIPAL AND RURAL WATER USAGE SUMMARY
MILLS COUNTY, IOWA

USER 2020	POPULATION	GPCPD	AVERAGE DAY USE RESIDENTIAL IN HOUSE	RESIDENTIAL OTHER	INDUSTRIAL & COMMERCIAL	TOTAL	MAXIMUM DAY USE
Emerson	620	125	59.3	10.4	7.8	77.5	155.0
Glenwood	8,892	469	1,098.9	193.9	2,877.5	4,170.3	6,881.1
Hastings	85	353	23.0	4.0	3.0	30.0	60.0
Hendersen	170	140	19.2	3.4	1.2	23.8	47.5
Malvern	896	143	79.6	14.0	34.7	128.3	256.6
Pacific Junction	393	143	42.9	7.6	5.6	56.1	112.2
Silver City	174	168	22.4	4.0	2.9	29.3	58.6
Tabor	1,177	125	112.5	19.9	14.7	147.1	294.2
Rural & Other	4,280	100	363.8	64.2	-	428.0	856.0
Total County	16,687		1,821.6	321.4	2,947.4	5,090.4	8,721.2

Average and maximum day usage in thousand gallons per day

MUNICIPAL AND RURAL WATER USAGE SUMMARY

POTTAWATTAMIE COUNTY, IOWA

			AVERAGE DAY USE				
			RESIDENTIAL				MAXIMUM DAY USE
USER 1973	POPULATION	GPCPD	IN HOUSE	OTHER	INDUSTRIAL & COMMERCIAL	TOTAL	
Avoca	1,568	170	203.9	36.0	26.7	266.6	426.5
Carson	773	123	72.8	12.8	9.5	95.1	190.2
Council Bluffs	62,103	135	3,844.5	678.0	3,867.0	8,389.5	12,315.0
Crescent	299	67	15.3	2.7	2.0	20.0	63.0
Hancock	233	53	9.5	1.7	1.2	12.4	24.7
Macedonia	340	88	22.9	4.0	3.0	29.9	58.8
McClelland	145	80	8.9	1.5	1.2	11.6	23.2
Minden	444	103	35.0	6.1	4.6	45.7	91.5
Neola	996	113	86.1	15.2	11.3	112.6	225.1
Oakland	1,612	113	139.4	24.6	18.2	182.2	364.3
Treynor	577	143	63.1	11.1	8.3	82.5	156.8
Underwood	471	113	51.6	9.1	6.7	67.4	134.8
Walnut	892	103	70.3	12.4	9.2	91.9	150.0
Rural & Other	13,457	60	686.3	121.1	-	807.4	1,614.8
Total County	83,910		5,309.6	936.3	3,968.9	10,214.8	15,838.7

Average and maximum day usage in thousand gallons per day

MUNICIPAL AND RURAL WATER USAGE SUMMARY

POTTAWATTAMIE COUNTY, IOWA

			AVERAGE DAY USE				
			RESIDENTIAL				MAXIMUM DAY USE
USER 1995	POPULATION	GPCPD	IN HOUSE	OTHER	INDUSTRIAL & COMMERCIAL	TOTAL	
Avoca	1,790	170	232.8	41.1	30.4	304.3	486.0
Carson	900	145	99.8	17.6	13.1	130.5	261.0
Council Bluffs	69,212	170	5,324.0	940.0	5,554.0	11,818.0	18,756.0
Crescent	410	100	31.4	5.5	4.1	41.0	131.2
Hancock	270	75	15.5	2.7	2.1	20.3	40.5
Macedonia	435	100	33.3	5.9	4.3	43.5	87.0
McClelland	150	100	11.5	2.0	1.5	15.0	30.0
Minden	525	125	50.2	8.9	6.5	65.6	131.2
Neola	1,200	135	123.9	21.9	16.2	162.0	324.0
Oakland	1,820	135	188.0	33.2	24.5	245.7	491.4
Treynor	1,350	165	174.4	30.8	22.8	228.0	445.6
Underwood	820	135	87.4	14.9	11.1	110.7	221.4
Walnut	1,050	125	100.5	17.7	13.1	131.3	213.9
Rural & Other	13,457	100	1,143.8	201.9	-	1,345.7	2,691.4
Total County	93,389		7,616.5	1,344.1	5,703.7	14,661.6	24,311.5

Average and maximum day usage in thousand gallons per day

MUNICIPAL AND RURAL WATER USAGE SUMMARY

POTTAWATTAMIE COUNTY, IOWA

USER 2020	POPULATION	GPCPD	AVERAGE DAY USE RESIDENTIAL IN HOUSE	AVERAGE DAY USE RESIDENTIAL OTHER	AVERAGE DAY USE INDUSTRIAL & COMMERCIAL	TOTAL	MAXIMUM DAY USE
Avoca	2,047	170	266.2	47.0	34.8	348.0	556.8
Carson	912	150	104.6	18.5	13.7	136.8	273.6
Council Bluffs	86,851		7,701.0	1,359.0	8,034.0	17,094.0	27,350.0
Crescent	560	100	42.8	7.6	5.6	56.0	174.2
Hancock	280	80	17.1	3.0	2.3	22.4	44.8
Macedonia	470	100	36.0	6.3	4.7	47.0	94.0
McClelland	156	100	11.9	2.1	1.6	15.6	31.2
Minden	540	130	53.7	9.5	7.0	70.2	140.4
Neola	1,395	140	149.4	26.4	19.5	195.3	390.6
Oakland	2,060	140	220.6	38.9	28.9	288.4	576.8
Treynor	1,929	170	250.8	44.3	32.8	327.9	655.8
Underwood	1,028	140	110.1	19.4	14.4	143.9	287.8
Walnut	1,200	130	119.3	21.1	15.6	156.0	254.0
Rural & Other	13,457	100	1,143.8	201.9	-	1,345.7	2,691.4
Total County	112,885		10,227.3	1,805.0	8,214.9	20,247.2	33,521.4

Average and maximum day usage in thousand gallons per day

SECTION C

POLITICAL AND LEGAL ASPECTS FOR PLANNING AND OPERATING INSTITUTIONS

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POLITICAL AND LEGAL ASPECTS
FOR
PLANNING AND OPERATING INSTITUTIONS

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SECTION C

POLITICAL AND LEGAL ASPECTS FOR PLANNING AND OPERATING INSTITUTIONS

While the focus of this study is on Nebraska and its political and legal structure, it nevertheless forecasts some of the problems which will have to be resolved in later stages of this report. The study has deliberately not attempted to resolve all questions relating to the political and legal structure of water service in the State of Iowa, which are outlined in Iowa Code Annotated 399. 1 et seq. This is because it is apparent that the single largest utility provider in the region being studied is the Metropolitan Utilities District, headquartered in Omaha which serves not only beyond the city limits of Omaha and the county limits of Douglas County but also provides water service to Carter Lake, Iowa.

The preliminary study describes an overview of the powers of Nebraska municipal corporations and "special districts" to provide water to inhabitants and on a contract basis to non-residents, answers specific questions raised regarding extraterritorial service, interlocal cooperative ventures and consolidation of districts, and provides some policy considerations

relevant to the problems of water service, creation of districts across local boundaries and political and legal problems encountered therein.

Initially four areas will be explored. These include the following problems:

1. The capability of the Metropolitan Utilities District to expand beyond its district boundaries in terms of providing services.
2. The capabilities of municipalities which provide water to expand their services beyond their corporate limits.
3. Whether utilities districts in more than one state may engage in cooperative ventures to provide water to their respective customers.
4. Whether Nebraska and Iowa rural districts may make water and sewage treatment available outside their districts combining to provide the service and creating in effect regional districts.

POWERS OF MUNICIPAL CORPORATIONS AND SPECIAL DISTRICTS

It will be helpful to analyze Nebraska water law as it affects possible

regional cooperative ventures. In June of 1971, the Nebraska Soil and Water Conservation Commission published, "Appendix D: Survey of Nebraska Water Law". The following materials are extracted from that study:

The term "water districts" is used to refer to various types of subdivision of state government which have special governmental powers in the realm of water development as contrasted with the general governmental powers of counties and cities. Each type of district government is established and operated pursuant to a separate legislative act. For example, sanitary and improvement districts in Nebraska are all governed by Section 31-701ff of the Nebraska statutes.

Individual districts have a governing board of directors, supervisors or trustees that conduct the business of the district. The board members are elected to their terms of office by the eligible voters within the boundaries of the district.

A district is established either through a declarative act of the state legislature or through an enabling act. With a declarative act the district is established when and where the legislature directs. An enabling act sets the procedure which must be

followed by persons seeking to organize a district. A typical procedure under an enabling act includes these steps: (1) Organizers circulate a petition in the area sought to be covered by the district attempting to obtain signers representing a statutorily established percentage of the eligible persons in the area; (2) A petition, with sufficient signers, is submitted to a governmental body (usually the county board) which is to hold a public hearing to determine whether the proposed district would be conducive to the public health, convenience or welfare, and, sometimes, the proper boundaries for the district; (3) The governmental body conducting the hearing either denies or approves the petition; (4) Approval of the petition either means that the district is then established or that an election is to be held on the question of whether the district will be established; (5) The district comes into existence, the first board is selected and the district is ready to begin operation pursuant to the powers and directives of the enabling act.

Counties

Counties whose powers are generally outlined in Nebraska revised Statutes Chapter 23 and to Chapter 31, Articles I

and IX) may create, through their county boards, planning commissions to adopt and implement a comprehensive development plan, and adopt zoning regulations, which may regulate, among other things, surface water drainage. Special zones may be established in those areas subject to seasonal or periodic flooding. This zoning power may be exercised in conjunction with flood plain zoning responsibilities under the Nebraska Flood Plain Regulation Act of 1967. This county zoning power, however, is not to be exercised within the limits of any incorporated city or village nor within the area over which a city or village has been granted zoning jurisdiction and is exercising that jurisdiction.

There are also special provisions for flood control by the county governments.

County boards have the power to cause all natural water courses to be kept clean and free of obstructions in such manner to permit natural flow. This may be done on their own initiative or upon request of or petition.

Any board may carry out drainage improvement projects by creating or changing a water course, ditch or drain in such a manner as is necessary to drain lots, land, roads or railroads. In addition, the County Drainage Act of 1959 empowers counties to maintain adequate drainage in road ditches, public and private ditches and natural water courses. Upon petition by any landowner, the county board makes an investigation and declares whether or not the facts of the petition are true. If true, the county may assist in the drainage.

Cities.

Cities of the metropolitan class (which are generally governed by Chapter 14 of the Nebraska Revised Statutes and Chapter 18 relating to cities of all classes) are those which have a population of 300,000 inhabitants or more. Omaha is the only city within this definition.

The metropolitan class city has power to zone or more precisely, to develop a comprehensive plan which, among other things, will secure safety from floods. This zoning power may be exercised to zone the city flood plains under the Flood Plain Regulation Act of 1967. The city council has the power

to regulate by ordinance, under its zoning power, in areas within three miles of the corporate limits, except as to construction on farms for farm purposes. In addition, since August 27, 1971, when the governing body of a metropolitan class city determines it is in the best interest of the city, the operation and maintenance of a drainage district organized by landowners may be assumed by the city and the real and personal property, assets, obligations and responsibilities of that district transferred to it.

Cities of the primary class, which are generally governed by Chapter 15 of the Nebraska Revised Statutes, include those having more than 100,000 population and less than 300,000 population with Lincoln being the only primary class city. In addition to the general powers for a city of the primary class which are the same as those for cities of the metropolitan class, a primary city has the power to establish, alter, and change the channel of water courses, and to wall and cover them over, to establish, make and regulate public wells, cisterns, aquaducts and reservoirs of water, and to provide for filling them.

When a system of water works has been adopted by the city and the people have voted to borrow money, the mayor and

council may: (1) Construct and maintain such system; (2) Make necessary rules and regulations; and (3) Do all other necessary acts including the exercise of the right of eminent domain.

Cities of the first class, which are generally regulated by the Nebraska Revised Statutes Chapter 16 and Chapter 18 pertaining to cities of all classes (are those having 5,000 population and not more than 100,000 inhabitants and have the basic powers of cities of the primary and metropolitan class.

A city of the first class has the power to establish, alter, and change the channel of water courses, and wall and cover them over. No city is liable in damages on account of accumulations of surface waters which fall upon its site unless such accumulations are caused by the act of a city officer while employed in his official capacity with recorded authorization of the mayor and council.

Water and sewer districts may be created and regulated by a city of the first class. The city may also create a system of water purification for the city's water works system.

Those rights, powers, authority and jurisdiction conferred on counties under the county flood control provisions are also conferred upon cities of the first class. Also, like powers under the County Flood Control Act of 1963, they are conferred on such city and may be exercised, in the absence of federal participation or sponsorship, whenever any project of flood control outside the limits of such city directly affects the welfare of such city and involves a cost of not to exceed $500,000.

In addition to these authorities, cities of the first class, commencing on August 26, 1971, are authorized, apparently without limitation to develop, implement, amend, change or modify a general program of flood and storm water control, drainage and disposal. Flood plain zoning responsibility in authority is also vested in these cities under the Flood Plain Regulation Act of 1967.

Nebraska law requires cities of the second class, i.e. all cities, towns and villages containing more than 1,000 and not more than 5,000 inhabitants to be governed by Chapter 17-101 - 153. Villages with not less than 100 nor more than 600 persons may be governed by 17-201 - 17-231. Second class cities, under limited circumstances, may

opt for the village form of government. The reduction in class of city is governed by 17-306 - 17-309.

Second class cities and villages have specific powers to carry out their various functions which in effect are basically the same as those for cities of other classes. Among those particular powers affecting the water resources as utilization of and protection against flood and surface waters. Such cities and villages have the power: (1) To establish and alter channels of water courses, and to wall them or cover them over; (2) To establish and regulate wells and other water conveyers of storage facilities; (3) to fill the same; and (4) To erect and maintain a dike or dikes as protection against flood or surface waters. They are granted the power of eminent domain to acquire a right of way over land within or not more than two miles outside the corporate limits for the purpose of constructing a ditch and dike to prevent flooding by a water course.
Such cities and villages may also cooperate with the federal government in flood control projects. If the federal government would acquire the entire site upon which a city of the second class or village is located under such flood control project,

the city or village may be moved to another site and retain its corporate identity by observing certain procedures.

The power to contract for and erect water works and other water supply systems is granted subject to certain procedures. The city or village may take, hold and condemn property necessary for this purpose, including land beyond their territorial limits.

Rural water districts.

There are areas in Nebraska where the rural, farm and nonfarm residents cannot individually obtain suitable water supplies. Some of these areas do, however, contain localized supply sources of adequate quantity and quality which could be utilized for the general benefit of the region.

The rural water district, organized and operated pursuant to Section 46-1001 to 46-1020 of the Nebraska Statutes, serves to accomplish the planning, financing, construction and allocation of costs to users necessary for the rural delivery of a water supply where it is needed for home and livestock use. Section 46-1001.01 (supp. 1969) of the Nebraska Statutes (as amended by LB 544 82 Nebraska Legislature 1st session 1971) provides

that no new rural water districts may be organized after June 30, 1972. There are five rural water districts in Nebraska located in Nemaha, Boyd, Pawnee, Johnson and Otoe counties, and five other districts were in the process of organizing in 1971.

Nebraska's rural water districts have the power to have perpetual succession, subject to statutory provision for dissolution; to condemn by eminent domain; to sue and be sued; to enter into contracts; to acquire real and personal property; to construct, maintain and operate suitable water works; and to borrow money for the financing of up to 95% of the cost of such construction.

Sanitary and improvement districts, which are governed by the provisions of Section 31-701 to 31-766 of the Nebraska Statutes have responsibilities of drainage, recreation, water supply and sewage disposal.

Metropolitan Utilities District.

A single metropolitan utilities district exists in Nebraska serving the Omaha metropolitan area. Authority for this district

was derived from Sections 14-1101 to 14-1114 and from 14-1001 to 14-1041 which provides for metropolitan water districts, the predecessor of a metropolitan utilities district. Its responsibility lies in providing utilities, presently only gas and water, for all users within its boundaries. Water districts were authorized by the legislature and given the same powers as the other public purpose corporations. Such districts were expressly granted any and all powers granted to cities and villages of the state for the construction or extension of water works.

A later session of the legislature provided that any metropolitan water district assuming control over any other public utility in addition to water would become a metropolitan utilities district. Such a utility district was also given all the powers conferred upon the metropolitan water districts, and these powers were extended to apply to any other public utility under the district's control.

This brief outline of the political structure of the state of Nebraska with respect to the creation of water control districts

and water supply districts should be useful in assessing the impact on regional programs authorized or contemplated.

OMAHA MUD EXPANSION

The Metropolitan Utilities District has the capability of expanding beyond its district boundaries in terms of providing services. An examination of the present Nebraska statutes yields an answer. Nebraska Revised Statutes 14-1001 provides as follows:

> "Whenever in this state a city of the metropolitan class and one or more adjacent municipalities or precincts, or both, are served in whole or in part by a common water works system, owned and controlled by the metropolitan city, then the territory within the limits of the metropolitan city and said one or more adjacent municipalities or precincts, or both, including any precinct without the metropolitan city or adjacent municipalities that may be now or hereafter served in whole or in part by the common water works system, shall form and constitute a metropolitan district . . . The members of the water board of the metropolitan city shall become the board of directors

of the metropolitan water district. Each of the members shall serve out the term for which he was elected as member of the water board. A municipality, not of the metropolitan class, now actually operating a general water works system of its own, shall not be included in the water district so long as it continues to operate its own water plant. No precinct without the adjacent municipalities shall become a part of the water district except upon formal approval and proclamation by the board of directors."

It is clear from this provision that if a city which is not one of the metropolitan class is actually operating a general water works system it will not be included in the water district during the pendency of that operation. Furthermore, the formal approval and proclamation by the board of directors of the district is an essential element in the bringing in of a precinct outside of the adjacent municipalities.

The second critical provision in the Nebraska statute is Section 14-1111. The language reads as follows:

"In addition to any and all powers hereto fore granted to metropolitan water districts or metropolitan utilities districts, any such district may, in its discretion, by authorization of its board of directors, contract to sell water for use by a water works and water distribution system owned and operated by a city of any class or village, except a metropolitan city. The water so sold shall be used for the same domestic, mechanical, public and fire purposes as water which a metropolitan water district or metropolitan utilities district supplies the consumers served water directly by it. The rates for water so sold shall be fixed by the metropolitan water district or metropolitan utilities district, including therein a demand or capacity charge in addition to a charge for the volume of water delivered. All water so delivered shall be metered at its point of delivery. The cost of any main extensions necessary to deliver the water to the city or village contracting for such supply shall be paid by it and set forth in the contract. The term of such

contract shall not exceed a 25 years period. The two succeeding provisions of the Nebraska Statutes provide corollary powers for the recipient municipalities."

Section 14-1112 reads as follows:

"To accomplish the purposes of Section 14-1111, cities of all classes and villages, except metropolitan cities, shall have the power to contract withthe metropolitan water or metropolitan utilities district and pay the charges and costs in the manner provided in the contract for the purpose of maintaining an adequate supply of water for the water works and distribution system serving such municipality, such contract to be approved by resolution of the governing body of such municipality."

Section 14-1113 provides as follows:

"Notwithstanding any provisions of law applicable to cities, villages, metropolitan water districts and metropolitan utilities districts to the contrary, Sections 14-1111 to 14-1313 shall be deemed to be an

act complete within itself to cover the entire subject to which it relates, hence to be an independent act."

What is clear from an examination of these statutes are the following items:

1. A metropolitan utilities district may indeed expand beyond its present boundaries in terms of providing services by entering into a contract with other municipalities which are not currently operating a water works system. It appears that this may include the provision of water in areas not previously supplied by the host municipality.
2. Such arrangement is only possible upon the approval and resolution of the board of directors of the metropolitan water or utilities district.
3. Both the utilities district and the contracting municipalities have the authority under the statute to enter into such an agreements notwithstanding any other provision and the Nebraska Revised Statutes.

4. The water supply may be used by the contracting municipalities for any purpose for which water is used by customers within the utility district.

5. The rates for water sold are fixed by the metropolitan water or utilities district and these include the demand or capacity charge in addition to a charge for the volume of water delivered with the contracting city required to pay the cost of any main extensions necessary to deliver the water to the city or village contracting for this supply.

6. The term of the contract shall never exceed 25 years.

MUNICIPAL WATER SYSTEM EXPANSION

May municipalities, other than metropolitan water or utilities districts, expand their water services beyond their corporate limits?

Nebraska Revised Statutes 19-2701 provides:

A city of the first class or second class may enter into a contract or contracts to sell electric, water, or sewer service to persons beyond the corporate

limits of such a city when, in the judgment of the mayor and council of such a city not having a board of public works or of its board of public works in such a city having such board, it is beneficial to any such city to do so. No such contract shall run for a period in excess of twenty-five years. Such a city is hereby authorized and empowered to enter into contracts for the furnishing of electric service to persons, firms, associations, and corporations beyond the corporate limits of such a city.

In the case of Burger v. Beatrice, 181 Neb. 213 (1967) the Nebraska Supreme Court was confronted with the question of whether a first-class city could expand its water supply capacity, by use of its eminent domain powers, for the benefit of a manufacturing plant being erected on the outskirts of the city.

The court held that when a city engages in a public utility business it must provide water service to all inhabitants alike who desire it at the same rate for the same service. 181 Neb. at 218. Relying on Nebraska Revised Statutes

Section 19-2701, the court decided that first and second class cities do have the power to sell the utility service beyond their city limits. But it held that "There is nothing to indicate that a person outside the limits of the city could demand as a right the use of the water service of a city". 181 Neb. at 219. The high court pointed out that water service to those individuals is "contractual and permissive, and in no sense mandatory or the result of a duty imposed by legislative action". (ibid.)

Thus, it is clear that first and second class cities may do the following:

1. They may provide water services on a contractual basis outside of their territorial limits.
2. They have no obligation to do so.
3. The cases do not indicate that the rate for such service must be on the same basis as the rate for the residents of the city. The controlling doctrine of rate differentials emerges from the case of City of Texarkana v. Wiggins, 246 S. W. 2d 622 (Tex. 1962) a case in which the users challenged the city's charge of fifty percent more over that

charged to residents and the court held that outside consumers were entitled to service at reasonable rates and the mere physical fact of residence outside the city limits was not a sufficient basis for a rate difference. Cities now uniformly introduce evidence which might justify charging outsiders higher rates. Regular claims include: (1) where the water system is financed by general obligation bonds, or from property taxes, rather than solely from water revenues, city residents are burdened with an obligation beyond that reflected in water rates and a differential is justified; (2) where outside areas are more sparsely settled than city areas and the cost of maintenance and service may be higher; (3) where a city meter connection improves the value of the property served and outsiders, being free from property taxes, otherwise would return nothing for the enhancement of their property created by the availability of city water. See Sax, Municipal Water Supply for

Nonresidents: Recent Developments and a Suggestion for the future, 5. Nat. Res. J. 54, 55-57 (1965).

4. Whether the rates charged outsiders are established by the city or by a state utilities commission is usually controlled by whether the city is acting through a contract or as a formal public utility. See: Towle v. Salem, 13 P. U. R. (N. S.) 507 (Nebraska, 1935) which held that the state commission might control utility rates where the city is acting extraterritorially as a public utility and Valcour v. Morrisville, 158 Atl. 83, 86 (Vermont, 1932) and Valcour v. Morrisville, 2 A. 2d 312 (Vermont, 1938) which stand for the proposition that if the city serves only as a contractor and not as a public utility, the state commission has no control. (See, generally, Kneier, "State Supervision over Municipally Owned Utilities", 49 Columbia L. Rev. 180, 194 (1949). (See also, Note, "The Duty of a Public Utility to Render Adequate Service: Its Scope and Enforcement," 62 Columbia L. Rev. 312 (1962).

RURAL WATER DISTRICT EXPANSION

May rural districts make water supply and treatment available outside their boundaries combining, in effect, to create regional districts?

The 1971 Nebraska Legislature altered the provision authorizing creation of rural water districts. After June 30, 1972, no new rural water districts are allowed to be organized under the provisions of the Rural Water District Act and any attempted organization of such district which was not complete by that date is "null, void and of no effect" for the purpose of organizing such districts. Neb. Rev. Stat. 46-1001.01. However districts existing before that time "shall enjoy all rights, duties, powers and authorities conferred" by the statute.

Properly formed rural water districts had to be outside of a five mile distance from metropolitan, primary or first class cities and two miles of second class cities and one mile of villages pending approval of the governing body of the city or village. Neb. Rev. Stat. 46-1002.

Of critical importance in the powers of the districts is 46-1009 which states:

> In carrying out the provisions of Sections 46-1001 to 1020, the board of directors of any such rural water district is authorized to enter into contracts with agencies of the State of Nebraska or of the United States, or municipalities, for the obtaining of water service for use by the district or for furnishing the same for domestic or other uses.

Furthermore, the district is authorized to serve owners of land outside the district by provisions found in Neb. Rev. Stat. 46-1012 which states that owners of land outside the district "which can economically be served by the facilities of the district may petition to become attached to such district. Such petition for attachment shall be supported by signatures of land owners... and shall state...(2) that such lands are without an adequate water supply; and (3) that attachment to such district will be conducive to and will promote the public health, convenience and welfare".

Additionally, districts are allowed to consolidate by provision of Neb. Rev. Stat. 46-1021-1026, which permits such mergers even across county lines, by order of the county board of the county in which the district with the largest acreage of land was originally incorporated and organized.

The 1972 Nebraska Blue Book indicates the existence of only four Rural Water Districts in the state and, because of the cut-off of creation of new districts, the device is limited. (This latest published figure conflicts, of course, with that found in the Survey of Nebraska Water Law, p. 111, and cited above at p. C 12.)

The conclusions to be reached are as follows:

1. Rural Water Districts are public agencies which could supply water in areas of Nebraska but which are no longer allowed to be created under the statutes of the state.
2. Possessing broad powers, including eminent domain, the districts could merge, even across county lines, as well as provide for attachment of owners outside the districts.
3. The device of rural water districts was not widely used during the life of the statutes allowing creation of such districts.

COOPERATIVE VENTURES

May utility districts in more than one state engage in a cooperative venture to provide water to their customers?

The Advisory Commission on Intergovernmental Relations in its Handbook for Interlocal Agreements and Contracts (1967) indicated that agreements and contracts are without doubt the most widely used formal method of cooperation among governments in the United States and they present "a flexible, yet predictable and enforceable method of adaptation among governmental jurisdictions".

Two provisions in the Nebraska statutes control the question. The first contains the law creating the Commission on Intergovernmental Cooperation. (Nebraska Revised Statutes, 81-816 et seq.) This act establishes, at least, the policy of the state vis-a-vis intergovernmental cooperation and stipulates that the Nebraska Commission shall "encourage and assist the legislative, executive, administrative and judicial officials and employees of this state to develop and maintain friendly contact by correspondence, by conference, and otherwise, with such officials and employees of the other states, of the federal

government, and of local units of government....." and "to endeavor to advance cooperation between this state and other units of government whenever it seems advisable to do so by formulating proposals for, and by facilitating (a) the adoption of compacts, (b) the enactment of uniform or reciprocal statutes, (c) the adoption of uniform or reciprocal administrative rules and regulations, (d) the informal cooperation of governmental offices with one another, (e) the personal cooperation of governmental officials and employees with one another, individually, (f) the interchange and clearance of research and information, and (g) any other suitable process....."

Since the adoption of Nebraska Revised Statutes 81-820 in 1937 (Laws 1937, c. 110 Sec. 5, p. 408) a second and specific law was adopted in 1963 entitled the Interlocal Cooperation Act.

Found in Nebraska Revised States 23-2201 - 2207, this law enables mutual cooperation between units of government and specifically states that any power exercised by a public agency of Nebraska "may be exercised and enjoyed jointly with any other public agency of this state having such power... and with any public agency of any other state..." (Neb. Rev. Stat. 23-2204 (1).

These agencies may enter into agreements with one another for joint or cooperative action provided such an agreement specifies:

1. Its duration;
2. The precise organization, composition, and nature of any separate legal or administrative entity created thereby together with the powers delegated thereto, provided such entity may be legally created;
3. Its purpose or purposes;
4. The manner of financing the joint or cooperative undertaking and of establishing and maintaining a budget therefor;
5. The permissible method or methods to be employed in accomplishing the partial or complete termination of the agreement and for disposing of property upon such partial or complete termination;
6. Any other necessary and proper matters. (Neb. Rev. Stat. 23-2204(3).

An additional provision states that "Any one or more public agencies may contract with any one or more other public agencies to perform any governmental service, activity, or undertaking which each public agency entering into the contract is authorized by law to perform; provided, that such contract shall be authorized by the governing body of each party to the contract. Such contract shall set forth fully the purposes, powers, rights, objectives, and responsibilities of the contracting parties. Neb. Rev. Stat. 23-2207.

If the latter provision stood alone, it would present some problems with respect to furnishing water to other agencies of government, since the operative language reads "perform any governmental service". In the law of municipal corporations, the term "governmental" is distinguishable from "proprietary" when defining a function of a polity. The former relates to those functions performed on behalf of the state; the latter to those functions which might be regarded as either non-essential, not a delegations of a state power, for profit or those for which a fee may be paid.

The distinctions between functions is not always logical; in Caughlin v. Omaha, 103 Neb. 726 (1919) the Nebraska Supreme Court held that operating public parks and beaches was a governmental function and in 1957 in Patrick v. Bellevue, 164 Neb. 196 the court rules that operating a free dump for residents to dispose garbage in was governmental, for example. However, at least three cases have held that the operation of a waterworks is a proprietary function. See: Harms v. Beatrice, 142 Neb. 219 (1942) Burger v. Beatrice, 181 Neb. 213 (1967) and Crosswhite v. Lincoln, 185 Neb. 331 (1970).

But with regard to the question of whether public agencies in Nebraska may enter into cooperative agreements with other agencies of government (in other states), it would appear that the controlling language is the broader wording found in Neb. Rev. Stat. 23-2204, which relates to the exercise of "any power... privilege or authority..." which would, of course, include the maintenance, operation and contracting for water outside the limits of the municipality or district not otherwise prohibited by law.

The following conclusions may be drawn:

1. By statute, the Nebraska Legislature has encouraged intergovernmental cooperation and agreements as a matter of policy.

2. By statute, Nebraska has created a scheme whereby agencies of government (and this would include cities and water districts) may cooperate with agencies of government of other states to exercise any power mutually enjoyed by the contracting agencies.

3. The potential barrier to such cooperation found in Neb. Rev. Stat. 23-2207 is eliminated by reference to the Broader power conferred on governmental agencies in the powers provision of Nebraska revised Statutes 23-2204.

POLICY CONSIDERATIONS

The following is a policy consideration paper dealing with the provision of water by municipal corporations and other public agencies, outside their corporate boundaries.

<u>Extraterritorial Powers.</u>

Of course, the universal rule relating to the exercise of

powers or activities by a municipality is that a municipality may not exercise powers beyond its territorial limits in the absence of an expressed or implied delegation of authority by the state consitution or the state legislature. Such authority, as has been seen, has been granted to municipalities, water districts and utilities districts by the Nebraska Legislature. Ziegler, "Acquisition and Protection of Water Supplies by Municipalities", 57 Michigan Law Review 349, 357 (1959) examines the doctrine of reasonableness with respect to the acquisition of water supplies and indicates:

> When a municipality's activity results in injury to a lawful use made by another riparian landowner, a city will be prohibited from continuing its use unless it condemns the water right of the complainant. Or the city may be ordered by the court to pay damages for the injury caused. (In Nebraska, see Crawford Co. v. Hathaway, 67 Neb. 325 (1903)).

This cited Nebraska case also appears to stand for the proposition that a municipal corporation diverting water from outside its limits into the city for use by its inhabitants, where no injury results to another user, will probably not be interfered with by the courts.

Police Powers.

But, as Ziegler has written, there are other rights belonging to landowners adjacent to a natural supply of water which, when exercised, will likely not be bothered by the municipality, but will interfere with the municipal use by damaging the purity of the water, including swimming, boating, bathing and fishing in natural streams and lakes. If the municipal corporation does not have extraterritorial police power it cannot prevent acts which might pollute, unless it condemns the landowner's rights rights to the use.

There are legal methods available to the city to protect its outside water supply, including exclusion of persons from the reservoir (Phillips v. City of Golden, 14 P. 2d 1013 (Colo., 1932)).

Almost universally, the courts have held that cities may not exercise extraterritorial police powers without a specific authorization by the constitution or legislature. See 6 McQuillan, Municipal Corporations, 3d ed, Section 24.57 (1949). Exceptions to this rule are found in Lexington v. Jones, 160 S.W. 2d 19 (Ky., 1942) and Chambers v. St. Louis, 29 Mo. 543 (1860).

The problem is not pressing in either Iowa or Nebraska, for both states have legislation permitting municipalities to exercise control over their extraterritorial sources of water and waterworks to prevent or punish pollution and injury. See "Municipal Power Arising from the Ownership of Extra-territorial Property", 1957 University of Illinois Law Forum 99, 101.

Desirability of Cooperation

Ziegler has observed (op. cit. at 366-367) that there is a trend toward cooperation by municipalities as a unit with other persons or other governmental units in obtaining a joint supply of water. Nebraska's Metropolitan water and utilities legislation is illustrative of this trend, as is the Interlocal Cooperation Act. The features of such a joint endeavor which make it attractive include the following:

1. Since the monetary investment necessary to establish an operating water system is great, particularly where water is difficult to acquire, it is often advantageous to pool financial resources thereby cutting the cost to the individual municipal corporation.

2. A cooperative endeavor engenders a cooperative spirit between the municipality and its neighbors which is most beneficial to a community looking beyond its boundaries for a water supply or water transportation facilities.
3. A joint venture, particularly a water district, may permit the exercise of greater powers to acquire water than usually are possessed by a single municipality.
4. A joint venture often will allow the use of revenue raising measures separate from the revenue means available to individual municipalities, thereby providing a method to avoid the debt or tax limitations imposed on the individual municipality.

Consideration of these policy matters will assist in framing possible solutions to the problems arising in the Regional Water Supply Study. It is fortunate that existing legislation allows wide latitude in experimentation with cooperative agreements and contractual arrangements both within the state of Nebraska and the neighboring communities in Iowa.

SUMMARY

Certain factors are apparent from the research accomplished to date:

1. It is possible to create water systems which serve beyond the corporate limits of a city.

2. Utilities located within a municipal corporation may, by contract, be extended beyond the territorial limits of the polity.

3. Interlocal cooperation beyond state boundaries is permissible and, indeed, as far as Nebraska is concerned, is encouraged by the Intergovenmental Cooperation Act.

4. A body of case law has been developed over the years sustaining the constitutionality of most extraterritorial schemes for providing water service, which case law deals with the question of the duty of a municipality to serve, rate differentials, etc.

5. There are policy considerations which militate toward regionalism, including functional efficiency, reduced cost and better service.

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WATER AND RELATED LAND RESOURCES MANAGEMENT STUDY. VOLUME V. SU--ETC(U)

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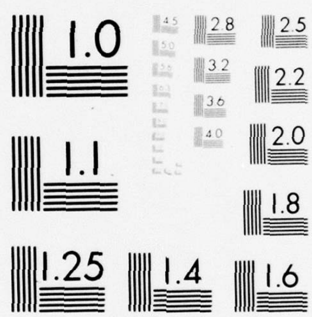

MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

The following section by Dr. Shugrue addresses specific questions formulated by the Corps of Engineers following submittal of the interim report.

What is necessary for the formation of the initial metropolitan utilities district?

It is a general proposition of municipal corporations law that such political entities derive their sole power from the legislature which creates them. Therefore it is not necessary for the formation of a utilities district for that district to do anything other than to conform with the statute which creates it. Because of the fact that the Nebraska legislature had provided for the creation of water districts in Nebraska Revised Statutes 14-1001 and following and for the creation of a metropolitan utilities district in Nebraska Revised Statutes 14-1101 and following. The water district only had to take on those characteristics of a metropolitan utilities district for it to exist as a metropolitan utilities district. That characteristic which was critical to the change from a water district to a metropolitan utilities district was the assumption of a control over and operation of any other public utility in addition to the operation of a waterworks system. Having done that, Nebraska Revised Statutes 14-1101 states, "The name of said metropolitan water districts shall thereafter be the metropolitan utilities district. It shall thereafter sue and be sued, and conduct its business under the new corporate name of the Metropolitan Utilities District, except it shall not sell any gas-burning equipment or appliances after January 1, 1963, at either retail or wholesale, if

the retail price of that item exceeds $50.00;..." Since the Metropolitan Utilities District is a municipal corporation it clearly follows the rule of municipal corporations that it may be created by the legislature. In the case of *Keystone Investment Company* v. *Metropolitan Utilities District*, 113 Nebraska 132, 202 N.W. 416, the Nebraska Supreme Court held that the Metropolitan Utilities District is a municipal corporation created by statute to take over, control and operate the water plant formerly owned by the city of Omaha and certain other public utilities. Furthermore, in the case of *State ex rel Metropolitan Utilities District* v. *City of Omaha*, 112 Nebraska 694, 200 N.W. 871, the Supreme Court held that the Metropolitan Utilities District is a corporation, and as such, it succeeded to the rights, powers and duties of the water board and the metropolitan water district. In the case of *Metropolitan Utilities District* v. *The City of Omaha*, 112 Nebraska 93, 198 N.W. 858, the Supreme Court stated that in 1921, the Metropolitan Utilities District became the successor of the Metropolitan Water District and has all the powers and authority conferred upon the district as fully and effectually as though the corporate name had not been changed."

What review process, if any, must MUD follow on its plans? Is it subject to any A-95 or similar review process to insure conformability with land use plans of MAPA?

The Metropolitan Utilities District is not required under the statute to submit itself to any review procedure nor is it subject to any review processes to insure conformibility with land use plans of the Metropolitan Area Planning Authority.

It is the feeling of corporate counsel for the Metropolitan Utilities District that since it is not a municipality (as opposed to a municipal corporation) it is not obligated to submit its plans to anyone other than the duly elected board of the Metropolitan Utilities District. Futhermore, it is the position of corporate counsel that not being a municipality the Metropolitan Utilities District is not an eligible grantee for federal monies and is therefore not covered by any of the requirements for those seeking federal grants and other assistance.

The Metropolitan Utilities District legislation probably provides a much better vehicle than the interlocal cooperation action act for providing liquid funds in emergency situations. For example, Nebraska Revised Statutes 14-1104 states:

> Metropolitan utilities districts may, when deemed necessary by a resolution with the board of directors, temporarily lend the funds of one utility to the fund of another utility under its control, at the current market rate of interest as determined by the board of directors. In the case of emergency, or for the purpose of short-term financing of extensions, improvements, additions and capital investments, the district may, by resolution of its board of directors, borrow money, for a term not to exceed five years, but the amount so borrowed shall not exceed ten percent of the depreciated plant value of the utility for which such money is borrowed...

There is a provision added to the metropolitan utilities district law in 1972, Nebraska Revised Statutes 14-1111.01 which further enhances the position of the Metropolitan Utilities District. That legislation, which became effective July 6, 1972, states:

> If a metropolitan utilities district shall supply water at retail to residents of a city or village other than a metropolitan city, or of a sanitary and improvement district, whether or not such city, village or sanitary and improvement district is within the district boundaries, such city, village, or sanitary and improvement district and metropolitan utilities district shall have power and authority to enter into a contract to obtain the use of facilities and services of the water utility of such district in order to collect from the residents supplied water by

the district sewer use or rental fees or charges for other utility services for such city, village or sanitary and improvement district, in the same manner and to the same extent as if provided for such services to metropolitan cities,....

Does a metropolitan-class city have the same or larger water supply development capabilities?

Assuming a metropolitan utilities district had not been created under Article 11 of Chapter 14 of the Nebraska Statutes, a metropolitan-class city would be required to (a) have a water department, or (b) create a water district.

If there were a water department, it would be created under Nebraska Revised Statutes 14-901 and following and would be overseen by a water board which, according to Nebraska Revised Statutes 14-905 "shall have general charge, supervision, and control of all matters pertaining to the water supply of such city for domestic, mechanical, public, and fire purposes as hereinafter provided." The powers of the water district, found in Nebraska Revised Statutes 14-1002 appear to be similar to those powers granted to other classes of cities for the language states, "It may exercise any and all the powers that are now or may be granted to cities and villages by the general statutes of this state for the construction or extension of waterworks."

It is clear from an examination of the case law that when the Metropolitan Utilities District became the successor of the Metropolitan Water District that it had all the powers and authority conferred upon the district as fully and as effectually as though the corporate name had not been changed. Metropolitan Utilities District v. City of Omaha, 112 Nebraska 93, 198 N.W. 858.

The Future of Municipal Water Supplies in Nebraska

In a comprehensive article published in 52 Nebraska Law Review beginning at page 179 by Professor Richard S. Hansberger, Professor Jarret C. Oeltjen and Ralph J. Fischer, entitled Ground Water: From Windmills to Comprehensive Public Management, the authors pointed out at page 210 that:

> Many Nebraska municipalities are facing increasingly complex problems in providing potable water supplies to their inhabitants. Emminent experts have predicted that if the present rate of increase in ground water withdrawals for agricultural and urban continues a number of cities will encounter shortages during periods of peak demand in the forseeable future. (See E. Reed, "The Problem of Municipal Water Supply in Eastern Nebraska" 1962 (unpublished paper by the state geologist).)

Municipal water supplies presently pump about 184,000 acre feet annually, and it has been estimated that these withdrawals will triple in the next 50 years. In the Missouri tributaries basin, which includes the metropolitan area of Omaha, present usage is expected to quadruple. Almost all of this will be ground water, and plans must be made which compensate for the peak demands which will occur during drought periods.

The authors indicate that the first move toward insuring municipal use was when the city of Lincoln, Nebraska, filed an application with the Department of Water Resources in 1948 to appropriate underground waters for its well fields located on the banks of the Platte River at Ashland. This application --

followed by ones by Fremont, Grand Island, and the Omaha Metropolitan Utilities District -- were based on the rule of subflow which provides that water percolating through the banks and bed of a stream and flowing in connection with the water course is subject to appropriation in the same manner as surface water.

One of the best explanation of this doctrine, according to the authors of the Nebraska Law Review article, appears in Maricopa County Municipal Water Conservation District No. 1 v. Southwest Cotton Company, 39 Ariz. 65, 96-97, 4 P.2d 369, 380-81 (1931).

What are the Major Water Suppliers Required to Provide Citizens by Law

The point of reference with respect to the power of a metropolitan utilities district is Section 14-1102 of the Nebraska Revised Statutes. That section states that the metropolitan utilities district shall, as a separate and independent entity, become the successor of the metropolitan water district and shall succeed to the property and powers and assume the obligations of said district. A reference to Section 14-1002 relating to the power of water districts is essential. That section states:

> A metropolitan water district shall be a body corporate and possess all the usual powers of a corporation for public purposes, and in its name may sue and be sued, purchased, hold, and sell personal property in real estate. It shall have the sole management and control of its assets, including all water rents, revenues, and income authorized by law, all water works property, real and personal, now or hereafter owned by said metropolitan city or any municipality constituting a part of said district, or which may become a part of said common water works system, within or without said district. It may exercise any and all the powers that are now or may be granted to cities and villages by the general statutes of this state for the construction or extension of water works. A metropolitan water district may also produce and sell ice.

The next point of reference is Section 14-1008 which grants to the board of directors of the metropolitan water district the general charge, supervision, and control of all

matters pertaining to the water supply of the district for domestic, mechanical, public, and fire purposes.

The statute states that these powers include:

> The general charge, supervision, and control of the design, construction, operation, maintenance, and extension or improvement of the necessary plant to develop a power and to pump water. It shall have the authority to enter upon and utilize streets, alleys, and public grounds therefore upon due notice to the proper authorities controlling same, subject to the provisions of (law)....

An examination of the case of Burger v. City of Beatrice, 181 Nebraska 213 (1967) reveals this statement about the supply of water from a municipal corporation:

> A city in engaging in the production and distribution of water for the benefit of its inhabitants is engaged in a proprietary capacity rather than a governmental one. The distinction between its governmental status and is proprietary capacity have (sic) been made in the past by this court.

In Henry v. City of Lincoln, 93 Nebraska 331, 140 N.W. 664..., this court in dealing with the nature of the city's proprietary capacity said: "It is no part of its duty, as a municipal corporation, to engage in a purely business or commercial enterprise. When it seeks and obtains from the legislature permission to engage in such an enterprise, its act in so doing is purely voluntary on its part, and it thereby assumes a third relation, separate and distinct from the dual relations above considered. While occupying this third relation no governmental functions or corporate duties,

as a municipality, devolve upon it. It is then engaged in an ordinary business enterprise, and is bound by all the rules of law and procedure applicable to any other private corporation engaged in a like enterprise. It has no greater or higher privileges or immunities than are possessed by any other private corporation."

The court went on to say, "When it engages, therefore, in a public utility business, it must provide water service to all inhabitants alike who desire it at the same rate for the same service." 181 Nebraska 218.

While the court in the Burger case stated, "There is nothing to indicate that a person outside the limits of the city could demand as a right the use of the water service of a city," it is clear that the service required by a person living outside the corporate limits of the city but inside the boundaries of a water district or a metropolitan utilities district must be the same and at the same price offered to residents of the city. This is not to suggest that the metropolitan water district or a metropolitan utilities district has absolute unfettered discretion in establishing rates even if they be uniform. In the case of Erickson v. Metropolitan Utilities District, 171 Nebraska 654, the Nebraska Supreme Court said that the power and authority to determine what shall be a reasonable water rate is not without restriction. The general rules are set out in 12 McQuillin,

Municipal Corporations (3d ed.) Section 34.97, page 299, as follows:

> The rule forbidding unjust discrimination has been variously expressed: The charges must be equal to all for the same service under like circumstances. A public service corporation is impressed with the obligation of furnishing its service to each patron at the same price it makes to every other patron for the same or substantially the same or similar service. It "must be equal in its dealing with all." Yet "must treat the members of the general public alike." All patrons of the same class are entitled to the same service on equal terms. "The law will not and cannot tolerate discrimination and the charges of these quasi public corporations. There must be equality of rights to all and special privileges to none."

The Nebraska court went on to say, "It cannot well be gainsaid that if the record disclosed that the furnishing of water for use in nonconserving air conditioning equipment was a service materially other and different from general use, which was more costly to render for any reason, and a charge made on that account which was not unreasonable or discriminatory, it would be sustained. In determining validity this and all other elements bearing upon costs would be proper subjects of consideration in arriving at a rate charge.

It seems clear from this Supreme Court decision that dual pricing systems in Nebraska within a single water district or a metropolitan district are illegal. The law would seem to permit price differentials where circumstances are truly

different, that is, where there is a definable and discrete class of patrons or where the services being rendered outside the boundaries of the district itself on a contract basis.

Water Course Use Law

According to Report on the Framework Study Appendix D Survey of Nebraska Water Law (June 1971), riparianism was recognized by the Nebraska Supreme Court in several cases decided in the late 19th century. These would include Gill v. Lydick, 40 Nebraska 508, 59 N.W. 104 (1894); Clark v. Cambridge and Arapahoe Irrigation and Improvement Co., 45 Nebraska 798, 64 N.W. 239 (1895). But the study goes on to say that Nebraska's high court accepted a modified common law rule of riparian rights known as the rule of reasonable use. That rule provided that riparian had a right to make a beneficial use of the water of the stream, provided his use did not interfere unreasonably with the beneficial uses of other proprietors.

In 1889, the legislature declared that all persons, companies or corporations owning or claiming land on a bank or in the vicinity of any stream or entitled to the use of the water for irrigating such lands and might acquire a water right by appropriation to a beneficial use. Then in 1895, the legislature approved a complete revision of Nebraska irrigation laws. This revision remained unchanged since its enactment. It affirmed the right to divert unappropriated waters to a beneficial use; and it declared the waters of the state not previously appropriated to beneficial uses to be publicly owned and dedicated to the use of the people. Priority of time (first in time,

first in right) controls which appropriators have the superior right to water in time of shortage; however, some types of uses were given preference over others.

In the case of Wasserburger v. Coffee, 180 Nebraska 149, 141 N.W.2d 738 (1966), the Supreme Court said that April 4, 1895, "is the cut off date for the acquisition of riparian rights." Although this concept of riparian rights was clouded by the case of Brummund v. Vogel, decided by the state Supreme Court on May 16, 1969, one must examine the two doctrines separately.

The Survey of Nebraska Water Law states that the concept of riparian rights equates a right to use water with land ownership. At common law, persons owning land along a stream or lake were called riparian proprietors, and each of these proprietors had a right to use water upon his own riparian land as an incident of his ownership. The framework study continues stating that the riparian rights attach only to the use of surface waters in a natural water course or natural lake. A water course is defined in the Nebraska Statutes as "any depression or draw two feet below the surrounding lands and having a continuous outlet to a stream of water, or river or brook." (See Nebraska Revised Statutes 31-202.) The early common law, stated that each riparian was entitled to have the stream flow past his lands in all of its natural beauty

as it had been wont to follow. Under this natural flow theory one could not lawfully use water from the stream if the use caused injuries to those downstream. The framework study says that because this doctrine made no provision for consumptive uses such as irrigation, which is so essential in semi-arid areas, it was generally modified in a new rule of "reasonable use" was established in many states, including Nebraska. Under this doctrine, the riparians' use of the water must be reasonable in relation to the needs of all of the other riparians on the stream. Domestic uses have always been considered paramount, and riparians have been allowed to divert all the water needed for such purposes.

Prior appropriation is usually defined as a doctrine in which a property interest in the use of a definite quantity of stream flow may be acquired by diverting and applying it to a beneficial use.

In Nebraska it, like the riparian doctrine, applies only to surface waters in natural water courses or lake. This position was taken by Doyle, "Water Rights in Nebraska," 29 _Neb. L. Rev._ 385 (1950). Therefore, defused surface waters are not subject to appropriative rights.

Today, by statute, an application for appropriation of water in Nebraska must furnish the following information to the department of water resources: (1) name and address;

(2) source from which the appropriation is to be made; (3) the amount of water desired; (4) the location of the proposed diversion works; (5) the estimated time of completion of the diversion works and canals; (6) the estimated time by which water can be applied for beneficial purposes; (7) the purpose of the appropriation, and if for irrigation a description of the lands to be irrigated and the amount thereof; and (8) any additional facts which may be required by the department. See Nebraska Revised Statutes Section 46-233(2)(Reissue 1968).

Legal problems associated with transbasin diversion.

An excellent article published in Volume 51 of the Nebraska Law Review beginning at page 87, and entitled, "Interbasin Transfers: Nebraska Law and Legend," written by Jarret C. Oeltjen, Richard S. Harnsberger, and Ralph J. Fischer discusses the question of transbasin diversion. It points out that the legislation passed in 1893 is identical to that in force today. That legislation reads as follows:

> The water appropriated from a river or stream shall not be turned or permitted to run into the waters or channel of any other river or stream than that from which it is taken or appropriated, unless such stream exceeds in width 100 feet, in which event not more than 75 percent of the regular flow shall be taken. (See Nebraska Revised Statutes Section 46-206 Reissue 1968.)

But in 1895 issued a new code which contained another provision relative to the diversion issue:

> The owner or owners of any irrigation ditch or canal shall carefully maintain the embankments thereof so as to prevent waste therefrom, and shall return the unused water from such ditch or canal with as little waste thereof as possible to the stream from which such water was taken, or to the Missouri River. (Nebraska Revised Statutes Section 46-265 Reissue 1968.)

The authors of the article in the Nebraska Law Review assume that the section was intended to prohibit transbasin diversion as opposed to merely prohibiting waste. "Since all of Nebraska lies in the Missouri River Basin, no matter which stream returns surplus flowed into, it would find its way to

the Missouri River." But the authors emphasize that the section has not received such a broad interpretation.

Examining the Nebraska Constitution and provisions now found in Article XV, the authors conclude that there are no explicit constitutional prohibitions to transbasin diversion. They believe that the Constitution leaves the matter to the discretion of the legislature.

The question has not been without a great deal of litigation in modern Nebraska history. The initial case was Osterman v. Central Nebraska Public Power and Irrigation District, 131 Nebraska 356, 268 N.W. 334 (1936). In that case, the district had applied to the Department of Irrigation and Roads for water rights and was granted an appropriation of 600,000 feet of water from the Platte River. The water was to be diverted to land located beyond the Platte watershed into the basins of the Republican and Blue Rivers and so downstream appropriators and riparians objected to the Department's grant. The Department had found: (1) that diversion would not substantially depleat the ground waters of any portion of the Platte Valley; (2) that there were unappropriated waters in the North Platte and Platte Rivers; and (3) that the appropriations were not in any manner detrimental to the public interest. The Nebraska Supreme Court reversed the Department's action, disputing the facts found by

Utilities District v. City of Omaha, 112 Nebraska 93, 198 N.W.

858.

the Department and espousing a judicially announced public policy, finding it necessary to greatly protect the subflow interest of riparian proprietors, and setting forth a statutory interpretation which developed a rule of positive law prohibiting diversion.

Twenty-four years after Osterman, in Ainsworth Irrigation District v. Bejot, 170 Nebraska 257, 102 N.W. 2d 416 (1960) the Nebraska Supreme Court clarified its position on transbasin diversion.

The Nebraska Law Review article described the case as follows:

> The Ainsworth Irrigation District sought a permit to transport 91,800 acre feet of water by canal out of the Snake River watershed into the basin of the Niobrara River to irrigate approximately 33,960 acres of land. The Snake River runs north and slightly east into the Niobrara River, which empties into the Missouri River. The district's canal was to run for about 56 miles, intersecting and crossing several smaller streams on route. All these streams were tributary to the Niobrara, and no water was to be returned to the Snake. About 47 percent of the annual flow of the Snake River at the diversion sight was to be withdrawn.
>
> The objectors, relying primarily on Osterman, argued that the diversion would violate Section 46-265 of the Nebraska Statutes because water from the Snake River would cross the watershed and the surplus would flow into the Ni brara River, affecting an interbasin transfer. On the other hand the irrigation district claimed that the Snake and the Ni brara Rivers were but one stream, comprising the same watershed or basin.

the banks of the Platte River at Ashland. This application --

In 170 Nebraska 273, the Nebraska Supreme Court held:

> A river and all its tributaries constitutes a watershed, which may be defined as all the area lying within a divide, above a given point on a river or stream. The term watershed is synonymous with river basin, drainage basin, or catchment area, except in some instances, where by definition for specific purposes, in connection with specific agreements, the basin may have been extended upon the natural watershed.

Moreover, the complexity of the interbasin transfer issue is pointed out by the case of Metropolitan Utilities District v. Merritt Beach Company, 179 Nebraska 783, 140 N.W. 2d 626 (1966). In that case MUD applied to the Department of Water Resources for a permit to augment its water supply with 60 million gallons per day of ground water. By the provisions of Nebraska Revised Statutes Section 46-638 to 650 (Reissue 1968), the director of water resources is authorized to grant and administer permits to municipal corporations supplying water to cities to develop ground water supplies in the area to be served. The director granted MUD's applications.

The wells from which MUD sought to draw the water were located at a point on the Platte River about five miles from the confluence of the Platte and Missouri Rivers. The water was to be drawn from, or at least through, the ground. The water that MUD sought to develop was to be transported and used out of the Platte River watershed, and as riparian land owners in the Platte

River watershed, the objectors were permitted to question the legality of such a diversion. The court began its resolution of the diversion issue by sighting Meng v. Coffee, 67 Nebraska 500, 93 N.W. 713 (1903), for the proposition that the common law was enforced except as altered or modified by statute. The court concluded that what legislation did exist had developed into a patch-work fashion with the result that "rights in the use of ground water have not been determined nor protected, nor the public policy with reference to use of such under ground waters legislatively declared."

The ultimate conclusion of the court was that where the taking of water beyond a watershed causes no injury to appropriators or riparian owners, no reason exists for not permitting the use of waters for a public and beneficial purpose which would be otherwise lost. See 179 Nebraska at 801.

The Nebraska Law Review authors conclude that two contradictory hypotheses can be made about the MUD case. First, Osterman is "good law" and prohibits interbasin transfers of surface water. However, the bijou definition of watershed tempers the severity of the Osterman rule, and MUD applies a reasonable use test to transbasin use of ground water when no substantial injury is caused to appropriators or riparians.

The second hypothesis is that Osterman has been impliedly overruled by: (1) the balancing of the equities which underlies

(2) the express balancing of the equities in MUD when the court combined the concepts of reasonable use and lack of substantial injury; (3) the recognition in MUD that under ground waters and surface waters are part of one hydrologic cycle; and (4) the court's awareness in MUD that 56 million gallons per day or 93 percent of the recharge of the aquifer was coming directly from the Platte River.

There is a final question raised by the Nebraska Law Review authors: Is transbasin diversion an unconstitutional intrusion of vested water rights in those jurisdictions which recognized the riparian doctrine? The authors conclude that, "to reduce the possible of an unconstitutional taking when authorizing transbasin diversions, legislative provisions should be included to safeguard the area of origin and its future development.

The ultimate disposition of the problem depends upon the Nebraska legislature which alone has the power to determine the validity of interbasin transfers in Nebraska. While it may be argued that the Nebraska constitutional provision defining water as a basic human need and the earlier case decisions in this area preclude anything but a constitutional amendment allowing interbasin transfers, the development of case law along the lines of Meritt Beach surely indicate that the legislature can take the first step in resolving the problem.

In nineteen hundred and seventy three, the Nebraska Unicameral passed LB335, which became effective on March 13. The new law contained the following statement:

> The legislature hereby recognizes and declares that it is essential to the health and welfare of the people of the state of Nebraska to conserve, protect, develop and manage the natural resources of this state. The Legislature further recognizes the significant achievements that have been made in the conservation, protection, development and management of our natural resources, and declares that the most efficient and economical method of accelerating these achievements is by creating Natural Resources Districts encompassing all of the area of the state, as provided by this act. The Legislature further declares that the functions heretofore performed by soil and water conservation districts, watershed conservancy districts, watershed districts, advisory watershed improvement boards, and watershed planning boards shall be consolidated and made functions of natural resources districts; and the governing boards of such districts and boards shall complete, before July 1, 1972, the necessary transfers and other arrangements so that such boards may, on that date, begin the operation of natural resources districts, as provided by this act. The Legislature further declares that other special purpose districts, including rural water districts, ground water conservation districts, drainage districts, reclamation districts, and irrigation districts, are hereby encouraged to cooperate with and, where appropriate, to merge with natural resources districts created by this act.

This provision of the Nebraska statutes must be read in conjunction with the provisions of LB544, §7, of the laws of 1971, codified in Nebraska Revised Statutes 31-301.01.

That legislation provided that after June 30, 1972, no new drainage districts "shall be organized under the provisions

of Sections 31-301 to 31-377. Attempted formations of drainage districts under Sections 31-301 to 31-377 which have not been completed before July 1, 1972, shall be null, void and of no affect for the purpose of organizing such district."

While that provision dealt with drainage districts organized in the district court, the legislature also banned the initiation of drainage districts or other improvements by county authorities by LB544, now codified in Nebraska Revised Statutes 31-101.01.

Because the legislation dealing with natural resources districts specifically referred to the consolidation of functions of soil and water conservation districts, watershed conservancy districts, watershed districts, advisory watershed improvement boards, and watershed planning boards but only encouraged the cooperation and merger with natural resources districts by drainage districts, there is no necessary dissolution of such drainage districts nor is there a mandate that their functions be taken over by natural resources districts.

Funding Sources for Natural Resources Districts in Nebraska

According to the 1971 act, now codified in Nebraska Revised Statutes 2-3206 each district was to assume, on July 1, 1972, all assets, liabilities and obligations of any soil and water conservation districts, watershed conservancy district, watershed district, advisory watershed improvement board, and watershed planning board, whose territory is included within the boundaries of such natural resource district. The taxes levied in 1971 by the counties of this state pursuant to the law for watershed districts and watershed conservancy districts were to be treated as assets of such watershed districts and watershed conservancy districts and when funds are not available or paid to such districts on account of such levies until after July 1, 1972, such funds were to be paid to the order of the natural resources district or districts within the boundaries of which said watershed district or watershed conservancy district lies.

While the 1969 act referred to elsewhere in this report allowed a levy of not to exceed 2 mils annually, the 1972 law, effective July 6, 1972, provided as follows:

> Each district shall have the power and authority to levy a tax of not to exceed one mil annually on all of the taxable property, except intangible property, within

> such district unless a higher levy shall be authorized by a majority vote of those voting on the issue at a regular election on a referendum question submitted by resolution of the board of directors and certified to the secretary of state on or before August 25 of the election year.

The law provided that the proceeds of such tax shall be used for the operation of the district but not for the construction or purchasing of a headquarters or administration building.

In order to get around constitutional limitations on county levies, the language of the statute, now codified in Nebraska Revised Statutes 2-3225, states that:

> Such levies shall not be considered a part of the general county levy, it shall not be considered in connection with any limitation on levies of such counties.

Section 2-3226 permits each district to exercise the power and authority to issue revenue bonds for the purpose of financing construction of facilities authorized by the law. However, these bonds, must be approved by two-thirds of the members of the board of directors of the district. The district then pledges sufficient revenue from any revenue producing facility constructed with the aid of revenue bonds for the payment of principle and interest on such bonds. It must establish rates for such facilities at a sufficient level to provide for the operation of such facilities and for the bond payment.

The 1972 statutes, in 2-3234 state that no district shall contract for delivery for water to persons within the corporate limits of any village, city, or metropolitan utilities district, nor in competition therewith outside such corporate limits, except by consent of and written agreement with the governing body of such political subdivision. A village, city, or metropolitan utilities district may negotiate and, if necessary, exercise the power of emminent domain for the acquisition of water supply facilities of the district which are within its boundaries.

A *significant* element of the 1972 laws, found in Nebraska Revised Statutes 2-3261, provides as follows:

> Whenever the words soil and water conservation district, watershed conservancy district, watershed district, advisory watershed inprovement board, or watershed planning board appear in sections hereinafter listed in this section they shall, after July 1, 1972, be construed to mean and apply to the natural resources districts created pursuant to sections 2-3201 to 2-3261. In sections where an existing functions, powers, and duties are transferred and allocated to the natural resources districts are:
>
> (1) Section 2-1529;
>
> (2) Sections 23-320.01, 23-320.06, 23-320.08, 23-320.09, and 23-320.12;
>
> (3) Sections 31-551, 31-552, and 31-553;
>
> (4) Sections 46-604 and 46-629;
>
> (5) Sections 60-330;
>
> (6) Sections 72-222 and 72-1304; and

(7) Section 85-163.04.

This, of course, brings the authority of the natural resources districts directly into line with the provision of Nebraska Revised Statutes 2-3201, under which the legislature declared its intent to establish the "most efficient and economical method of ex ... achievements ... by creating natural resources districts ...."

The 1973 legislature also created the state natural resources commission giving it the sole power and authority to specify the date and all other terms for the sale of any lands or rights-of-way acquired wholly or in part with funds from the small watersheds flood control fund administered pursuant to sections 2-1502 to 2-1503.02 and to require the execution of all necessary documents to complete such sales. According to Nebraska Revised Statutes 2-1506.06 the commission or a political subdivision shall have the power to issue permits for the location or alteration of obstructions or land uses pursuant to the commission's or a political subdivision's land-use regulation standards or which would otherwise violate section 2-1506.05 or the commission's or a political subdivision's land use regulation standards.

A significant provision passed in the 1971 legislature is now contained in Nebraska Revised Statutes 2-1507.01. It states as follows:

When the commission finds from data developed by the United States Army Corps of Engineers or other agency that public health, safety and welfare requires rechanneling of a water course (1) to prevent loss of life and property because of flooding, or (2) to protect for agricultural purposes land which because of high water table has become or is about to become swampy or marshy, the commission shall do the planning and conduct engineering studies necessary to determine the most suitable route for such rechanneling in cooperation with the United States Army Corps of Engineers and such other agencies as it shall require; *provided*, that such planning and engineering studies shall not be undertaken unless the United States Army Corps of Engineers or other agency determines such plan to be economically feasible.

Water Supply Powers of Natural Resources Districts

The report on the framework study Appendix D in the survey of Nebraska water law published by the Nebraska Soil and Water Conservation Commission in June of 1971, reemphasizes the original provisions of Nebraska Revised Statutes 2-3229 which grants to natural resources districts "an array of project authorities available for local people to apply in solving local resource problems." These project authorities include :

(1) Erosion prevention and control;

(2) Prevention of damages from flood water and sediment;

(3) Flood prevention and control;

(4) Soil conservation;

(5) Water supply for any beneficial uses;

(6) Development, management, utilization and conservation of ground water and surface water;

(7) Pollution control;

(8) Solid waste disposal and sanitary drainage;

(9) Drainage improvement and channel rectification;

(10) Development in management in fish and wildlife habitat;

(11) Development and management of recreational and park facilities.

(12) Forestry and range management;

(13) Mosquito abatement.

The natural resources districts have the power to levy a tax of one mill (unless a higher levy shall be authorized by a majority vote of those voting at a regular election on a referendum question), to acquire and dispose of water rights, to act as fiscal agent for the United States, to cooperate with and furnish financial aid when it would advance the purposes of the district, to construct facilities necessary to carry out the purposes of the district, to store, transport and supply water to users in the district, to make studies, surveys and investigations and to conduct demonstration projects which advance district purposes, to acquire property by eminent domain, to promulgate and enforce land use regulations and ground water regulations in restricted circumstances, and to invest surplus funds.

It is clear that the natural resources district were invested with great powers by the legislature not only for the purpose of coordinating rather disjointed efforts authorized by earlier statutes but also to provide broad development of resources -- supposedly with an emphasis on water -- in the near future.

Why was the rural water district idea was disallowed after 30 June 1972?

At the present time the Nebraska Natural Resources Commission which oversees the operation of the resources districts -- and which, incidentally, are the only such consolidated organizations in the United States at the present time -- is preparing a history of the natural resources district concept and legislation. This history will be available late in February, 1975. At that time there will also be available a new Natural Resources District handbook.

Officials of the Natural Resources Commission in Lincoln indicate that it was the intention of the legislature to create a specific central system and to develop a single entity with power to deal with natural resources in identifiable river basins. This legislation was designed to get away from the multitude of agencies at the local level. It was difficult, the Commission officials indicated prior to the development of the natural resources districts for individuals, corporations and even officials to discover whom they should go to with their plans, and who had authority for implementing resources development.

Under the natural resources district concept there would be one local body to which application could be made and which would have authority granted by the legislature for implementing plans rather than the numerous bodies existing under previous statutes.

Since Nebraska is the only state with the natural resources district concept states such as New York and California have made inquiries to the state Commission in Lincoln for information dealing with the concept, the legislation itself and data on how the concept is working out.

The Nebraska Department of Water Resources

The Department of Water Resources was established by the legislature in 1957 and was assigned all of the powers and duties formerly exercised by the Bureau of Irrigation, Water Power and Drainage, in the Department of Roads. See generally Nebraska Revised Statutes Section 46-208 and following (Reissue 1968).

The department has original jurisdiction over matters pertaining to rights to the use of water in all natural streams in the state for irrigation, power and other useful purposes. In addition to determining water rights, the department must also regulate the use of water from natural streams in accordance with the rights which have been determined and made of record. The department must approve all plans for proposed drainage districts, it must conduct public hearings concerning rights to the use of waters of the state, it must make surveys of streams showing the location of possible of water power developments, irrigation or drainage projects, it must direct the operators of interstate ditches to construct and maintain measuring devices on such ditches at or near the state's boundaries, it must measure the quantity of water flowing in the streams of the state and make records, it must examine and approve plans of all proposed dams to be constructed for reservoir purposes or across the channel of natural streams, it must approve

the petitions for formation of proposed irrigation districts, reclamation districts and rural water districts (which powers are effected, of course, by the enactment of the natural resources district law), it must register when data is submitted by well owners all water wells in the state except those used for domestic purposes and issue permits relative to the spacing of water wells when special application for the same are filed.

A provision added to the Nebraska Statutes in 1972 governs applications for water power, their approval, their lease from the state, their renewal, cancellation and the grounds for same.

This legislation states that within six months after the approval of an application for water power, the applicant shall enter into a contract with the state through the department for leasing the use of all water so appropriated.

The entire statutory scheme found in the general provisions regulating irrigation lays out the power of the director of water resources to adjudicate water rights in the state of Nebraska. It must be remembered that while Nebraska was originally a riparian doctrine state, legislation was enacted adopting the principle of prior appropriation. See Nebraska v. Wyoming, 325 U.S. 589. A significant statute is 46-204 which states that the right to divert unappropriated waters of every natural stream for beneficial use shall never be denied.

The statute continues "priority of appropriation shall give the better right as between those using the water for the same purposes, but when the waters of any natural stream are not sufficient for the use of all those desiring the use of the same, those using the water for domestic purposes shall have the preference over those claiming it for any other purpose, and those using the water for agricultural purposes shall have the preference over those using the same for manufacturing purposes." Of significance in interpreting the statute is the decision in the Meng v. Coffee, which states that a reasonable use of water is largely a question of fact, depending upon the circumstances, but entire diversion, waste, or needless diminution is clearly unreasonable. See also Crawford County v. Hathaway, 67 Nebraska 325.

Water supply powers of sanitary and improvement districts.

In 1961 the Nebraska legislature passed a law, found now in Laws of Nebraska Chapter 142, Page 408, which authorize sanitary and improvement districts to acquire, improve and develop public parks, playgrounds, and recreational facilities, and to contract with public utility companys for the extension of their water mains in order to serve the areas within the districts.

Nebraska Revised Statutes Section 31-727 state that a sanitary and improvment district may be formed "for the purpose of installing electric service lines and conduits, a sewer system, a water system, a system of sidewalks, public roads, streets, and highways, to contract for water for fire protection and for resale to residents of the district, and to contract for gas and for electricity for street lighting for the public streets and highways within the said proposed district. And to acquire, improve and operate public parks, playgrounds and recreational facilities.

In Section 740 the law grants to the board of trustees of a sanitary and improvement districts organized under Sections 31-727 to 31-762 the power to provide for "establishing, maintaining, and constructing electric service lines and conduits, water mains, sewers, and disposal plants, and disposing of drainage, waste, and sewage of such district in a satisfactory

manner;... In an article appearing in Volume 5 Creighton Law Review at page 269, 276, the author suggests the utilization of all the powers laid out in Section 31-740 "enables an SID to become a virtual extension of a city of village, complete with all improvements characteristic of a developed municipality."

This does not mean that the sanitary and improvment district is totally autonomous with respect to the installation of improvements for Nebraska Revised Statutes 31-740 states that the plans for such improvements "shall be approved by the public works department of any municipality when such improvements or any part thereof are within the area of the zoning jurisdiction of such municipality, and plans and exact costs for public parks, playgrounds and recreational facilities shall be approved by resolution of the governing body of such municipality. Such approval shall relate to conformity with the master plan and the construction specifications and standards theretofore established by such municipality..." (Nebraska Revised Statutes Section 31-740 Supp. 1971.) It is clear from a reading of Nebraska Revised Statutes Section 31-740 that plans for any improvements other than for public parks, playgrounds and recreation facilities must be approved not only by the public works department of the municipality when such improvements or any part thereof are within the area of the zoning jurisdiction of such municipality, but also that they must be approved by resolution of the governing body of such municipality.

Since the principle advantage of the sanitary and improvement district to its developers is that it will ultimately be annexed by the municipality within whose zoning jurisdiction the SID is located, it is inevitable that the water supply system will be a function of the metropolitan utilities district, in cities of the metropolitan class, of which, of course, Omaha is the only one within the state of Nebraska.

Mutual ventures and the exercise of greater powers to acquire water.

It is certainly correct to assume that Professor Ziegler did not mean to suggest that all features of a joint endeavor which could conceivably make it attractive are applicable under the statutes of every state.

An examination of Nebraska's interlocal cooperation act found in Nebraska Revised Statutes 23-2201 to 2207 makes it clear that a cooperative venture does not vest the cooperating agencies with greater powers than they possessed prior to the execution of their agreement. Nebraska Revised Statutes 23-2204 states

> (1) Any power or powers, privileges or authority exercised or capable of exercise by a public agency of this state may be exercised and enjoyed jointly with any other public agency of this state having such power or powers, privilege or authority, and jointly with any public agency of any other state or of the United States to the extent that laws of such other state or of the United States permits such joint exercise or enjoyment. Any agency of the state government when acting jointly with any public agency may exercise and enjoy all the powers, privileges, and authority conferred by Sections 23-2201 to 23-2207 upon a public agency.

But an examination of 23-2207 leads inevitably to the conclusion that if a municipal corporation contracts with another municipal corporation for providing water the first municipal corporation can eliminate the cost of massive capital construction and delays accompanying such construction.

Iowa's Water Statute

The 1957 Iowa legislature enacted a water rights law establishing a permit system administered by a water commissioner. This is found in Iowa code chapter 455A (1958). Under the statute, both surface and ground water are regulated and subject to procurring a permit for use. The Iowa scheme places a general limitation of ten years on the length of a permit.

As a most comprehensive article by Jeffrey O'Connell in 47 Iowa L. Rev. at page 549 (Spring 1972), entitled, "Iowa's New Water Statute -- The Constitutionality of Regulating Existing Uses of Water," points out, the Iowa law "requires that all substantial uses of water be 'beneficial.'" A beneficial use is defined as the application of water to a useful purpose in Inuring to the benefit of the water user and subject to his dominion and control. The law permits the diversion, storage, or withdrawal of water for most substantial uses from any natural water course, under ground basin or water course, drainage ditch, or settling basin without a permit from the water commissioner. In addition, in general no water or material from the surface may be diverted directly into any underground water course or basin without a permit.

Certain uses are not regulated and, thus, require no permit and these are (1) the use of water for ordinary household purposes... poultry, livestock and domestic animals, (2) any other beneficial

use of water amounting to less than 5,000 gallons a day, (3) any beneficial use of surface flow from rivers bordering the state of Iowa or the use of groundwater on islands or former islands situated on such rivers, and (4) existing beneficial uses of water within the territorial boundaries of municipal corporations on the effective date of the new law which was May 16, 1957.

The law does require a permit for all regulated uses. These are: (1) Except for nonregulated uses, any use of more than 5,000 per day diverted, stored, or withdrawn from any source of supply except a municipal water system or other exempted source, (2) any diversions of water or any material from the surface directly into any underground water course or basin; except that any diversion existing on the effective date of the law does not require a permit if no waste or pollution is created, (3) any use by a muncipal corporation or persons supplying a municipality which increases water use in excess of 100,000 gallons or 3 percent per day, whichever is the greater, more than its highest beneficial use before the effective date of the law, (4) any use by an industrial user of water having its own water supply within the territorial boundaries of the municipal corporation when such use exceeds 3 percent more than the highest daily beneficial use before the effective date of the law.

Professor O'Connell outlines the procedure for securing a permit for a regulated use:

> (1) An application made made to the water commissioner must set forth the legal description of land on which the water will be used, the proposed beneficial use, and the quantity, time, place, and rate of diversion, storage, or withdrawal of water. The application must be accompanyied by a fee of $15 which is used by the commissioner to pay the cost of publishing notices of the hearing as required by the act.
>
> (2) Upon receipt of the application the water commissioner sets a time and place for a hearing which is usually held in the county where the permit is sought. The water commissioner or deputy water commissioner conducts the hearing.
>
> (3) Notice of the hearing is published by the water commissioner in a newspaper of general circulation in the county where the permit is sought once a week for two consecutive weeks. Copies of the notice are also sent to interested state departments and to any other persons who have filed a request for notification of any hearings affecting a designated area. There is no specified time limit from the date of application within which the water commissioner must conduct the hearing.
>
> (4) Any interested persons may appear at a hearing and present evidence for or against the application and may be represented by counsel who has the right to question anyone presenting evidence for or against the application. After the hearing (but again with no specified time limit), the water commissioner files with the counsel a written determination concerning the permit which is also mailed to the applicant and any other person who requests a copy.
>
> (5) Any person or public body aggrieved by a determination can appeal to the natural resources council within 30 days of the commissioner's determination. In turn, any person or public body aggrieved by the decision of the council may appeal to the district court in Polk county...or

> the district court...in the county where the proposed water use is located within 30 days of the determination by the natural resources council.

There is also a provision for modification or cancellation by the water commissioner of permits which have been granted.

With respect to the municipal uses, Professor O'Connell points out that at common law the general rule was that a municipality had not rights as a riparian owner to divert water from a stream for the purpose of a public water supply. Apparently Iowa did not follow this general rule. In the case of Willis v. City of Perry, 92 Iowa 297, 60 N.W. 727 (1894), the Iowa Supreme Court held that municipal uses were to be considered artificial uses; thus while not as sacrosanct as domestic use they would nonetheless not prohibit it. While it is true that Willis dealt with an underground stream, the court emphasized that the rles governing an underground stream were the same for a surface stream (with exceptions not pertinent). See 92 Iowa at 301, and 306.

In a later section of his treatise, Professor O'Connell indicates that there is authority that municipal uses take precedence over other riparian rights. "In Minnesota, a priority of municipal uses granted by the legislature both for domestic consumption and industrial uses was upheld against attack by an injured lower riparian user for water power." See 47 Iowa L. Rev. at 617 and Minneapolis Mill Company v. Board of Water Commissioners, 56 Minnesota 458, 58 N.W. 33 (1894). The

author indicates that even though the decision was based on the authority of the state over navigable streams for public purposes, which were held to include not only navigation but municipal uses, this limitation, if limitation it be, may not be very important. And notwithstanding any objections to the rule, Professor J. H. Beuscher of the Wisconsin Law School has predicted that the trend of the law will be to increase priorities for municipal uses. (See Beuscher, "Appropriation Water Law Elements in Riparians Doctrine States," 10 Buffalo L. Rev. 448, 455 (1961).

Rural Water Districts in Iowa

In 1966, the Iowa legislature first enacted the Rural Water District Law. The provisions were renumbered in the 1970 session. The provisions are currently found in ICA A. 2 et seq.

The following section will discuss the important aspects of the Iowa Water District Law.

Section 357 A. 2 provides for the creation of the districts. Under the law, a petition may be filed with the auditor requesting the county supervisors to incorporate and organize a district, encompassing an area not then included in any other district either in a single county or in any two or more counties which are adjacent. The purpose of such a district will be to provide an adequate supply of water for domestic purposes to residents not served by the water mains of any city or town water system and who cannot feasibly obtain adequate supplies of water from wells on their own premises.

The petition to the auditor and supervisors must be signed by owners of at least 50 percent of all the land lying within the outside perimeters of the area, and it must state:

1. The location of the district sought to be created;
2. The reason a district is needed.

Upon receipt of the petition properly submitted, I.C.A. 357 A.3 provides that a hearing on the elements of the petition

shall be set not less than 15 nor more than 30 days later. And, under the terms of I.C.A. 357 A. 5, any owner or occupant of land within the proposed boundaries may appear to be heard either by himself or by his legal representative. The supervisors may also heed written statements from the designated parties.

Presuming that the supervisors incorporate the Rural Water District, the members of the district shall meet, according to the terms of I.C.A. 357 A. 7, to elect directors. There shall be no more than nine such directors and, according to I.C.A. 357 A. 9, these members are elected in three classes, whose terms expire on the first, second and third anniversaries of the initial meeting. This obviously results not only in a degree of rotation, but also in continuity of the board's governance.

Section 357 A. 11 of the I.C.A. sets out the powers and duties of the Rural Water District board and these are the provisions thereof:

1. It will adopt rules and regulations for its governance.

2. It will maintain all necessary records.

3. It may employ attorneys, engineers and other professionals and such personnel as is necessary to carry out its functions.

4. Prior to each annual meeting, it must (a) prepare an estimated budget for its operations and (b) cause an audit of its accounts to be prepared for submission to the membership.

5. The board has the authority to acquire by gift, lease, purchase or grant, any property it needs and to acquire easements for lines and reservoirs by condemnation.

6. The statute provides the power to construct, operate, maintain, repair, enlarge or extend ponds, reservoirs and pipelines.

7. It has the power to borrow from or cooperate with any federal agency and to accept money or other aid from them.

8. Finally, it has the power to finance up to 90 percent of the cost of construction or purchase.

Of significant importance is the provision in I.C.A. 357 A. 13 which states that if the capacity of the district's facilities permits, it may sell water by contract to any city or town, other district, or other person, public or private, not within the boundaries of the district.

There is a provision for attachment found in I.C.A. 357 A. 14, which also permits boards to merge.

Under the terms of 357 A. 15, the board is given no taxing powers. At the same time, its revenue is not taxable by the state of Iowa or any of its political subdivisions.

Finally, lands may detach from the Rural Water District by following the scheme created in I.C.A. 357 A. 16.

Intergovernmental Relations With Emphasis on Federal Powers

Two elements of the federal power over water resources are significant. The first of these is the powers exercised by the congress of the United States itself. The second is the requirment that interstate agreements with respect to water uses (as well as other issues) be reduced to an interstate compact, approved by the congress of the United States.

Several clauses in the federal constitution give the national government the power to act in the area of water resources. These include the commerce power, the power to manage federal lands (the property clause), the war power, the treaty power, and the general welfare power which are the most significant sources of the federal authority. They are supplemented by the supremecy clause of the Constitution which permits the federal government to perform these functions without hindrance from the states.

As the framework study points out the commerce clause is the basis for the most important and extensively used federal power -- the navigation power. This power was established as an element of the commerce power in the case of Gibbons v. Ogden, 22 U.S. (Wheat.) 1, 84 (1824). In that case Mr. Chief Justice Marshall stated that all America understands and has uniformly understood the word commerce to comprehend navigation.

In the case of Daniel Ball, 77 U.S. (10 Wall.) 557 (1870), the Supreme Court ruled that navigable waterways were those which were navigable in fact. But in the case of United States v. Appalachian Power Company, 311 U.S. 377 (1940) the court concluded that a stream is navigable for purpose of exercising the navigation power if it is navigable in fact or can reasonably be made so. Thus the court appeared to leave the decision on navigability up to the discretion of congress as part of its function to assert navigability as an incident to its authorization or completion of federal water projects.

Control has also been asserted over non-navigable tributaries of navigable streams. In Oklahoma v. Guy F. Atkinson Co. 313 U.S. 508 (1941), the court wrote that "the power of flood control extends to the tributaries of navigable streams." In 1960 in the case of U.S. v. Grand River Dam Authority, 363 U.S. 229 (1960), the court held, "there is no constitutional reason why Congress cannot, under the commerce power, treat the watershed as a key to flood control on navigable streams and their tributaries."

Exercising its navigation powers, the United States can stake state created private water rights in the waters of a navigable stream without having to pay compensation. This is because of the proposition that all private rights the states attempt to create in navigable waters are never vested but are always subject to the navigation servitude and void as against the United States.

On the basis of just this brief analysis, it is clear that the exercise of federal power over streams whether navigable or non-navigable is broad, indeed. The second proposition, with regard to the authority of the congress of the United States to approve interstate contacts, which authority is found in Article 1, Section 10 of the United States Constitution, permits the negotiation modification and embodyment of state policy conflicts in such a compact.

The framework study states that in order to receive federal approval the negotiation of an interstate compact usually involves:

(1) An act of congress authorizing negotiation (and usually providing for a federal representative to the negotiations);

(2) Actual negotiation of the terms by the state and federal representatives; and

(3) Ratification of the compact by the affected states and Congress.

Illustrative of the compacts entered into by Nebraska with other states are the underlying South Platte River Compact between Colorado and Nebraska approved by the act of March 8, 1926, 44 Stat. 195 (1926). The purpose of the compact, according to the framework study, is to "remove present and future causes of controversy between the compacting states over the South Platte River, running easterly from Colorado into Nebraska, and Lodgepole Creek, running southeasterly from Nebraska to Colorado."

The Republican River Compact between Colorado, Kansas and Nebraska was negotiated pursuant to law and its subject matter is the apportionment of the Republican River and its tributaries above its junction with the Smokey Hill River in Kansas.

The Upper Niobrara River Compact between Nebraska and Wyoming, which received congressional approval on August 4, 1969, (83 Stat. 86 (1969)), provided for approtionment of the waters of the Upper Niobrary River Basin, allowed gathering of data on ground water and underground water flow so that such waters may be apportioned by supplement to the compact, and removed causes of controversy to promote interstate comity.

These are just illustrative of the scope of compacts authorized and approved by the Congress of the United States and negotiated between the states themselves.

It is conceivable that if the states of Iowa and Nebraska have policy differences with respect to the use of water resources those differences can be negotiated and a settlement reached under the doctrines applicable to other interstate compacts.

Historically, Iowa and Nebraska have used the compact procedure to establish the boundaries between the two states. See Special Acts and Resolutions of Nebraska Legislature, Revised Statutes of Nebraska 1943, Volume 2A, page 728-733.

A very recent article by Ben A. Rich, "Managing Recreational Rivers," 8 Akron L. Rev. 43 (Fall, 1974) states that the fundamental issue in any situation involving use by the public by natural water courses concerns the concept of navigability. While the Rich article is, naturally, concerned with the use of rivers for recreation purposes, he does provide a thorough and up-to-date analysis of the doctrine of navigability both from a standpoint of federal cases and the state cases.

On the question of interstate compacts, an article by Jerome C. Muys "Interstate Compacts and Regional Water Resources Planning and Management," (6 Natural Resources Lawyer 153,(1973)), should be examined.

Muys states that:

> Perhaps the chief advantages of the compact approach to river basin management is its adaptability to the particular needs of a basin. Since a compact must be the product of agreement among the states, it can be shaped to meet any problems the states desire, in accordance with the particular regional philosophy of appropriate intergovernmental relations. Thus it can be targeted on a single problem, such as water quality management, or may see comprehensive, multipurpose goals. Similarly, it may create a permanent administrative entity and endow it with such powers, narrow or sweeping, as the participating states deem necessary or appropriate to accomplish the regional objectives, so long as they are consistent with broad national water resource goals.

Muys cautions that one criticism of the compact approach is that compacts require an exceedingly long time to negotiate

and effectuate by state ratification and congressional consent. But he states that if there are delays, they appear to have been caused by specific policy controversies rather than the use of the compact mechanism.

While it might be implied that a compact is necessary whenever there is any agreement to be reached between the states, Muys points out that in 1893 the Supreme Court concluded in a carefully considered dictum in Virginia v. Tennessee, 148 U.S. 503, 518-19, that certain interstate agreements might not require congressional consent because their subject matter did not threaten national interests.

He goes on to point out that there is little need to speculate long about the applicability of the compact clause to water compacts.

> In Wharton v. Wise, decided a year after Virginia v. Tennessee, the court assumed that consent would be required for agreements whose "stipulations might affect subjects place under the control of Congress, such as commerce and the navigation of public waters, which is included under the power to regulate commerce." (See 153 U.S. 155, 171 (1894).

It should be also emphasized that in the water resources field, the Weeks Act of 1911 granted the unconditional advance consent of Congress to "each of the several states of the Union to enter into any agreement or compact, not in conflict with any law of the United States, with any other state or states for the purpose of conserving forests and the water supply of

the states entering into such agreement or compact." See 16 U.S. Code Section 552 (1970).

Muys states that such blanket consent to a broad class of future compacts prior to their actual negotiation so that their impact on federal interests cannot be adequately assessed by Congress, constitutes practical abandonment by Congress of its constitutional responsibility to review all interstate compacts in order to protect and promote the national interest. He claims that such an exercise of its consent authority seems clearly inappropriate unless Congress has satisfied itself that a particular category of compacts poses little or no threat to federal interest.

SECTION D

COST ANALYSIS PROGRAM

COST ANALYSIS PROGRAM

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SECTION D

COST ANALYSIS PROGRAM

This section presents data from the computer program designed for use in the cost analysis portion of this report. The program runs in three segments, 1) capital and operation and maintenance (O & M) cost determination, 2) present worth analysis of one time (capital) and annual (operation and maintenance) costs, and 3) grouping of facilities by scheme and summation of present worth costs. The present worth analysis portion is a library program adapted for use in this report while costing and planning segments are specific for this project.

A variety of options are available once the basic data has been entered. The following is a computer printout of questions asked of the operator prior to actual running of the program and typical answers to these questions.

```
DO YOU WANT TO PERFORM CAPITAL AND O&M COSTS
? yes
CONTINGENCY FACTOR FOR CAPITAL COSTS - .XX
? .25
CONTINGENCY FACTOR FOR O&M COSTS - .XX
? .10
```

```
DO YOU WANT TO PERFORM CAPITAL AND O&M COSTS
? no
DO YOU WANT TO PERFORM PRESENT WORTH CALCULATIONS
? yes
TREATMENT PLANT LIFE - XX YRS.
? 35
BOOSTER STATION LIFE - XX YRS.
? 25
STORAGE FACILITY LIFE - XX YRS.
? 50
PIPELINE LIFE - XX YRS.
? 75
WHAT INTEREST RATE (AS A FRACTION - .XX)
? .07
END MAINLIN
END MAINLIN
```

Any or all of the seven variables may be changed between computer runs as well as performing only the capital cost routine on input data or doing only a present worth analysis on known costs.

Descriptions and listings of input and output data generated for and by this program follow.

INPUT DATA

Data generated for input into the program consist of five basic groupings:

1) Treatment plants.

2) Booster pumping station.

3) Water storage facilities.

4) Population data.

5) Pipeline segments.

Portions of input data common to all or most of the groupings will be explained first followed by items specific to each group.

```
001 BLAIR                      1E 150 2 1975 4.        1.15     1       1
 1               2                 3  4   5
```

1. Identification number

   0 - 89 treatment plants

   100 - 252 booster stations

   300 - 429 storage facilities

   550 - 628 population data

   629 - 735 pipeline segments

2. Identification name descriptive of data location and scheme.

3. Scheme number indicative of plan, concept, and alternative.

Number	Plan(s)
1xx	I
2xx	II
3xx	III
4xx	IV
5xx	I, II, III
6xx	i, II
7xx	i, III
8xx	II, III
	Concept(s)
x1x	A
x2x	B
x3x	C
x4x	D
x5x	A, C, D.
x6x	A, B, C, D
x7x	B, C
x8x	A, D
	Alternative(s)
xx0	All
xx1	1
xx2	2

4. Cost generation type.

1 = O & M checkpoint only.

2 = capital cost and O & M checkpoint.

3 = capital cost checkpoint only.

5. Year of cost checkpoint.

Treatment Plants

```
040 SPRINGFIELD        1E2  152  2  1985  1.5       .3       3   2  5  16
 1        2                  3   4    5    6        7        8   9 10  11
```

6. Design capacity of initial construction or expansion in mgd.

7. Averate daily treatment and pumpage by facility in mgd.

8. Source code.

1 = surface source

2 = wells < 1000 gpm capacity

3 = wells > 1000 gpm capacity

4 = wellfields (large plants)

9. Number of wells (if applicable) for small and intermediate plants only.

10. Treatment class code.

Surface sources

1 = Missouri River

2 = MUD Florence

3 = MUD Missouri River South

Ground water sources

4 = MUD Missouri River South

5 = Platte River Valley

6 = Other areas

7 = MUD Platte River West

8 = MUD Platte River South

9 = Missouri River Valley

11. Maximum number of hours of operation to meet maximum day demands. Less than 24 for some plants under 2 mgd capacity only.

Booster Stations

```
113 HARRISON RWD 1     5F 560 2 1985 .7      .33
└─┘ └───────────────────┘ └─┘ └┘ └──┘ └──┘    └──┘
 1            2            3  4   5   12       13
```

12. Design capacity of initial construction or expansion in mgd.

13. Average day pumpage in mgd.

Storage Facilities

322	MINDEN	560	2	1975	.047	2
1	2	3	4	5	14	15

14. Maximum storage capacity in mg.

15. Facility type

1 = Elevated

2 = Standpipe

3 = Steel ground level

4 = Concrete ground level

Population Data

595	NEHAWKA	560	298	389	444	400.000	4.
1	2	3	16	17	18	19	20

16. 1970 population

17. 1995 population

18. 2020 population

19. Per capita capital cost factor applied to population increase.

20. Per capita operation and maintenance cost factor applied to total population.

Pipeline Segments

```
645  HARR CO RWD 3F          360    1985   16  4.26     3
 1          2                 3      5     21   22      23
```

21. Pipeline diameter in inches.

22. Pipeline length in miles.

23. Pipeline location code

    1 = City

    2 = Rural transmission

    3 = Rural distribution

EXPENDITURES REPORT

The expenditures report lists all capital and operation and maintenance costs in checkpoint years in $1000 and $1000/year, respectively, including the contingency factor entered with the input data.

Capital costs are one time expenditures in the year listed. Treatment plant capital costs are subdivided between sludge handling and remainder of facility. All capital costs generated for dates prior to 1975 are not actual expenditures but costs computed on a 1974 basis for use in rebuild and salvage value portions of the present worth analysis.

Annual operation and maintenance expenditure are checkpoint costs for the year indicated. A straight line gradient between computed operation and maintenance values is assumed. Chemical, sludge handling, and other O & M are subdivisions of total treatment plant annual expenditures.

SCHEME REPORT

Grouping of the many facilities analyzed into alternative schemes is accomplished by a computer routine with the results listed in this report. Each scheme consists of a water supply plan, a growth concept, and possibly an alternative. Water supply plans I through III as outlined in Chapter VI of this report are evaluated for all areas. Growth concepts A, C and D are the same for all non-metropolitan areas with Concept B affecting only the satellite and new cities in the non-metropolitan areas. Therefore the scheme reports are divided into metropolitan and non-metropolitan areas to minimize duplication of grouping effort.

The scheme reports list each treatment plant, booster station, storage facility, and pipeline segment for the particular scheme and totalizes the present worth value of each facility.

Following subsections contain, respectively, input data to costing routine, expenditures report using a capital cost contingency of 25% and an operation and maintenance contingency of 10%, scheme reports of facility present worth using a treatment plant life of 35 years, booster pumping station life of 25 years, storage facility life of 50 years, and pipeline life of 75 years with each scheme computed at an interest rate of 7 percent.

INPUT DATA

001 BLAIR	1E	150	2	1975	4.	1.15	1		1	
			1	1984		1.5	1		1	
			2	1985	4.	3.47	1		1	
			1	1995		4.01	1		1	
			1	2020		4.3	1		1	
002 BLAIR	1B	120	2	1975	4.	1.15	1		1	
			1	1984		2.55	1		1	
			2	1985	11.	5.69	1		1	
			2	1995	4.25	8.1	1		1	
			1	2020		10.95	1		1	
003 BLAIR	2E	250	2	1975	4.	1.15	1		1	
			1	1984		1.5	1		1	
			2	1985	2.75	3.31	1		1	
			2	1995	.5	3.7	1		1	
			1	2020		3.91	1		1	
004 BLAIR	2B	220	2	1975	4.	1.15	1		1	
			1	1984		2.55	1		1	
			2	1985	6.5	4.37	1		1	
			2	1995	2.75	5.82	1		1	
			1	2020		7.19	1		1	
005 BLAIR	3E	350	2	1975	5.	1.58	1		1	
			1	1984		1.99	1		1	
			2	1985	8.5	6.39	1		1	
			2	1995	1.	7.24	1		1	
			1	2020		7.7	1		1	
006 BLAIR	3B	320	2	1975	5.	1.58	1		1	
			1	1984		2.77	1		1	
			2	1985	18.	9.77	1		1	
			2	1995	2.5	12.42	1		1	
			3	2007	2.5		1		1	
			1	2020		14.8	1		1	
007 MODALE	1F	160	2	1985	.82	.22	2	15	5	12
			1	2020		.22	2	10	5	12
008 PISGAH	1F	160	2	1985	1.05	.36	2	7	6	16
			1	2020		.37	2	7	6	16
009 MAGNOLIA	1F	160	2	1985	.75	.23	2	12	6	12
			1	2020		.24	2	12	6	12
010 DUNLAP	1F	160	2	1985	2.	.71	2	10	6	18
			1	1995		.77	2	10	6	18
			1	2020		.79	2	10	6	18
011 MISSOURI VALLEY	1E	150	2	1975	1.3	.43	2	4	6	16
			2	1985	1.3	.85	2	4	6	24
			1	1995		1.26	2	4	6	24
			1	2020		1.32	2	4	6	24
012 MISSOURI VALLEY	1B	120	2	1975	1.3	.43	2	4	6	16
			2	1985	3.	1.39	2	8	6	24
			2	1995	.5	2.35	2	0	6	
			1	2020		2.48	2	000	6	
013 MODAMIN	2E	250	2	1975	1.	.57	1		1	16
			1	1984		.62	1		1	16
			2	1985	5.	2.92	1		1	24
			2	1995	.5	3.23	1		1	
			1	2020		3.32	1		1	
014 MODAMIN	2B	220	2	1975	1.	.57	1		1	16
			1	1984		1.14	1		1	16
			2	1985	7.	3.47	1		1	24

				2	1995	.5	4.32	1		1	
				1	2020		4.47	1		1	
015	HONEY CREEK	1F	160	2	1985	1.65	.68	2	9	6	16
				1	2020		.68	2	9	6	16
016	NEOLA	1F	160	2	1985	2.6	1.13	2	15	6	18
				1	2020		1.13	2	15	6	18
017	AVOCA	1F	160	2	1985	2.6	1.13	2	9	6	18
				1	2020		1.13	2	9	6	18
018	WALNUT	1F	160	2	1985	1.7	.72	2	9	6	16
				1	2020		.72	2	9	6	16
019	POTT RWD6	1F	160	2	1985	1.9	.78	2	15	6	16
				1	2020		.78	2	15	6	16
020	OAKLAND	1F	160	2	1985	1.5	.49	2	14	6	16
				1	2020		.49	2	14	6	16
021	CARSON	1F	160	2	1985	.7	.28	2	8	6	16
				1	2020		.28	2	8	6	16
022	POTT RWD 7	1F	160	2	1985	.7	.24	2	8	6	12
				1	2020		.24	2	8	6	12
023	HENDERSON	1F	160	2	1985	1.	.39	2	12	6	16
				1	2020		.39	2	12	6	16
024	MILLS RWD 3	1F	160	2	1985	2.1	.88	2	20	6	16
				1	2020		.9	2	20	6	16
025	PACIFIC JUNCTION	1E1	151	3	1965	.72		2	3	6	16
				2	1975	3.	1.53	2	4	6	16
				2	1985	2.	2.46	2	2	6	16
				2	1995	1.	3.49	2	1	6	16
				3	2007	1.		2	1	6	16
				1	2020		4.7	2	1	6	16
026	PACIFIC JUNCTION	1E2	152	2	1975	3.75	1.58	1		1	
				2	1985	2.	2.46	1		1	
				2	1995	1.	3.49	1		1	
				3	2007	1.		1		1	
				1	2020		4.7	1		1	
027	PACIFIC JUNCTION	1B1	121	3	1965	.72		2	3	6	16
				2	1975	3.	1.53	2	4	6	16
				2	1985	3.	2.46	2	4	6	16
				2	1995	.75	3.89	2	1	6	16
				3	2007	.75		2	1	6	
				1	2020		4.94	2	3	6	
028	PACIFIC JUNCTION	1B2	132	2	1975	3.75	1.58	1		1	
				2	1985	3.	2.46	1		1	
				2	1995	.75	3.89	1		1	
				3	2007	.75		1		1	
				1	2020		4.94	1		1	
029	PACIFIC JUNCTION	2E	250	2	1975	3.75	1.58	1		1	
				1	1984		2.46	1		1	
				2	1985	3.75	4.	1		1	
				2	1995	1.5	4.89	1		1	
				3	2007	1.25		1		1	
				1	2020		6.11	1		1	
030	PACIFIC JUNCTION	2B	220	2	1975	3.75	1.58	1		1	
				1	1984		2.46	1		1	

			2	1985	4.25	4.	1		1	
			2	1995	1.	4.86	1		1	
			3	2007	1.		1		1	
			1	2020		5.25	1		1	
031 PLATTSMOUTH	1E1	151	3	1973	3.		2	3	5	
			1	1975		.9	2	0	5	
			2	1995	.6	1.24	2	1	5	
			1	2020		1.29	2	0	5	
032 PLATTSMOUTH	1B1	121	3	1973	3.		2	3	5	
			1	1975		.9	2	0	5	
			3	1985	3.75		2	4	5	
			2	1995	.75	3.54	2	1	5	
			3	2007	.75		2	1	5	
			1	2020		3.79	2		5	
033 PLATTSMOUTH	6E2	652	2	1975	2.5	.9	1		1	
			2	1995	.55	1.24	1		1	
			3	2007	.55		1		1	
			1	2020		1.29	1		1	
034 PLATTSMOUTH	6B2	622	2	1975	3.5	.9	1		1	
			3	1985	3.5		1		1	
			2	1995	.65	3.54	1		1	
			3	2007	.6		1		1	
			1	2020		3.79	1		1	
035 LOUISVILLE	6F	660	2	1985	2.1	.73	3	3	5	16
			1	2020		.79	3		5	16
036 GREENWOOD	6F	660	2	1985	.4	.09	2	2	6	12
			2	1995	.4	.18	2	2	6	12
			1	2020		.21	2		6	12
037 NEHAWKA	5F	561	2	1985	.2	.07	2	3	6	12
			1	2020		.11	2		6	12
038 UNION	5F	561	2	1985	.12	.03	2	3	6	12
			1	2020		.03	2		6	12
039 WEEPING WATER	5F	561	2	1985	.75	.21	2	10	6	12
			1	2020		.25	2		6	12

040	SPRINGFIELD	1E2	152	2	1985	1.5	.3	3	2	5	16
				1	1995		.51	3		5	16
				2	2007	.5	.73	3	2	5	24
				1	2020		.95	3		5	
041	SPRINGFIELD	1B2	122	2	1985	6.5	.3	3	6	5	
				2	1995	1.	3.3	3	1	5	
				3	2007	1.		3	1	5	
				1	2020		4.44	3		5	
042	SPRINGFIELD	3E	350	2	1985	4.5	2.11	3	5	5	
				2	1995	1.5	2.48	3	1	5	
				3	2007	1.		3	1	5	
				1	2020		3.03	3		5	
043	SPRINGFIELD	3B	320	2	1985	10.	3.5	3	10	5	
				2	1995	2.	5.27	3	2	5	
				3	2007	1.5		3	1	5	
				1	2020		6.52	3		5	
044	VALLEY	1E	150	2	1985	1.75	.65	3	2	5	24
				2	1995	.45	.86	3	1	5	
				3	2007	.4		3		5	
				1	2020		1.28	3		5	
045	VALLEY	1B	120	2	1985	5.3	1.57	3	5	5	
				2	1995	1.6	2.69	3	2	5	
				3	2007	1.5		3	1	5	
				1	2020		4.15	3		5	
046	COUNCIL BLUFFS	1A	110	3	1952	17.		1		1	
				1	1975		8.39	1		1	
				2	1985	3.5	10.63	1		1	
				2	1995	5.	12.32	1		1	
				3	2007	4.5		1		1	
				1	2020		16.97	1		1	
047	COUNCIL BLUFFS	1B	120	3	1952	17.		1		1	
				1	1975		8.39	1		1	
				2	1985	6.	10.63	1		1	
				2	1995	2.5	13.53	1		1	
				3	2007	2.5		1		1	
				1	2020		16.2	1		1	
048	COUNCIL BLUFFS	1C	130	3	1952	17.		1		1	
				1	1975		8.39	1		1	
				2	1985	3.	10.63	1		1	
				2	1995	4.	12.28	1		1	
				3	2007	3.5		1		1	
				1	2020		16.28	1		1	
049	COUNCIL BLUFFS	1D	140	3	1952	17.		1		1	
				1	1975		8.39	1		1	
				2	1985	3.5	10.63	1		1	
				2	1995	5.5	12.32	1		1	
				3	2007	5.		1		1	
				1	2020		17.58	1		1	
050	COUNCIL BLUFFS	2A	210	3	1952	17.		1		1	
				1	1975		8.39	1		1	
				1	1984		10.63	1		1	
				2	1985	11.5	15.08	1		1	
				2	1995	5.	17.13	1		1	
				3	2007	4.5		1		1	
				1	2020		21.83	1		1	
051	COUNCIL BLUFFS	2B	220	3	1952	17.		1		1	

				1	1975		8.39	1	1
				1	1984		10.63	1	1
				2	1985	15.	15.08	1	1
				2	1995	3.	19.03	1	1
				3	2007	2.5		1	1
				1	2020		21.88	1	1
052	COUNCIL BLUFFS	2C	230	3	1952	17.		1	1
				1	1975		8.39	1	1
				1	1984		10.63	1	1
				2	1985	12.5	15.08	1	1
				2	1995	4.	17.78	1	1
				3	2007	3.5		1	1
				1	2020		21.96	1	1
053	COUNCIL BLUFFS	2D	240	3	1952	17.		1	1
				1	1975		8.39	1	1
				1	1984		10.63	1	1
				2	1985	13.	15.08	1	1
				2	1995	5.5	17.82	1	1
				3	2007	5.		1	1
				1	2020		23.26	1	1
054	COUNCIL BLUFFS	3A	310	3	1952	17.		1	1
				1	1975		8.39	1	1
				1	1984		10.63	1	1
				2	1985	11.	14.96	1	1
				2	1995	4.5	16.89	1	1
				3	2007	4.		1	1
				1	2020		21.28	1	1
055	COUNCIL BLUFFS	3B	320	3	1952	17.		1	1
				1	1975		8.39	1	1
				1	1984		10.63	1	1
				2	1985	12.5	14.96	1	1
				2	1995	2.5	17.62	1	1
				3	2007	2.		1	1
				1	2020		20.11	1	1
056	COUNCIL BLUFFS	3C	330	3	1952	17.		1	1
				1	1975		8.39	1	1
				1	1984		10.63	1	1
				2	1985	12.	14.96	1	1
				2	1995	4.	17.54	1	1
				3	2007	3.5		1	1
				1	2020		21.68	1	1
057	COUNCIL BLUFFS	3D	340	3	1952	17.		1	1
				1	1975		8.39	1	1
				1	1984		10.63	1	1
				2	1985	12.	14.96	1	1
				2	1995	5.	17.48	1	1
				3	2007	4.5		1	1
				1	2020		22.35	1	1
058	FLORENCE	7A	710	3	1958	140.		1	2
				1	1975		57.62	1	2
				1	1979		71.78	1	2
				1	1980		65.32	1	2
				3	1985	50.		1	2
				2	1995	25.	86.73	1	2
				3	2007	20.		1	2
				1	2020		109.66	1	2

059	FLORENCE	7B 720	3	1958	140.		1	2
			1	1975		57.62	1	2
			1	1979		68.24	1	2
			1	1980		60.91	1	2
			3	1985	50.		1	2
			2	1995	35.	88.12	1	2
			3	2007	30.		1	2
			1	2020		118.53	1	2
060	FLORENCE	7C 730	3	1958	140.		1	2
			1	1975		57.62	1	2
			1	1979		71.83	1	2
			1	1980		65.39	1	2
			3	1985	65.		1	2
			2	1995	30.	96.27	1	2
			3	2007	25.		1	2
			1	2020		121.98	1	2
061	FLORENCE	7D 740	3	1958	140.		1	2
			1	1975		57.67	1	2
			1	1979		71.91	1	2
			1	1980		65.49	1	2
			3	1985	45.		1	2
			2	1995	25.	86.19	1	2
			3	2007	25.		1	2
			1	2020		108.88	1	2
062	FLORENCE	3A 310	3	1958	140.		1	2
			1	1975		57.62	1	2
			1	1979		71.78	1	2
			1	1980		65.43	1	2
			3	1985	50.		1	2
			2	1995	25.	87.07	1	2
			3	2007	25.		1	2
			1	2020		110.05	1	2
063	FLORENCE	3B 320	3	1958	140.		1	2
			1	1975		57.62	1	2
			1	1979		68.24	1	2
			1	1980		61.22	1	2
			3	1985	50.		1	2
			2	1995	35.	90.41	1	2
			3	2007	30.		1	2
			1	2020		121.67	1	2
064	FLORENCE	3C 330	3	1958	140.		1	2
			1	1975		57.62	1	2
			1	1979		71.83	1	2
			1	1980		65.50	1	2
			3	1985	70.		1	2
			2	1995	25.	96.61	1	2
			3	2007	25.		1	2
			1	2020		122.37	1	2
065	FLORENCE	3D 340	3	1958	140.		1	2
			1	1975		57.62	1	2
			1	1979		71.91	1	2
			1	1980		65.60	1	2
			3	1985	45.		1	2
			2	1995	25.	86.53	1	2
			3	2007	25.		1	2
			1	2020		109.27	1	2

066	PLATTE SOUTH	5A	510	3	1968	60.		4	8
				1	1975		24.4	4	8
				1	1985		24.4	4	8
				2	1995	20.	26.1	4	8
				1	2020		34.01	4	8
067	PLATTE SOUTH	5B	520	3	1968	60.		4	8
				1	1975		24.4	4	8
				1	1985		24.4	4	8
				1	1995		15.59	4	8
				1	2020		23.12	4	8
068	PLATTE SOUTH	5C	530	3	1968	60.		4	8
				1	1975		24.4	4	8
				1	1985		24.4	4	8
				2	1995	15.	22.58	4	8
				1	2020		32.65	4	8
069	PLATTE SOUTH	5D	540	3	1968	60.		4	8
				1	1975		24.4	4	8
				1	1985		24.4	4	8
				2	1995	15.	25.49	4	8
				1	2020		32.46	4	8
070	MISSOURI SOUTH	1A1	111	2	1980	50.	10.13	1	3
				3	1985	45.		1	3
				2	1995	40.	40.49	1	3
				3	2007	35.		1	3
				1	2020		72.45	1	3
071	MISSOURI SOUTH	1B1	121	2	1980	30.	10.82	1	3
				3	1985	25.		1	3
				2	1995	25.	34.73	1	3
				3	2007	20.		1	3
				1	2020		51.59	1	3
072	MISSOURI SOUTH	1C1	131	2	1980	40.	10.13	1	3
				3	1985	35.		1	3
				2	1995	30.	34.75	1	3
				3	2007	30.		1	3
				1	2020		58.89	1	3
073	MISSOURI SOUTH	1D1	141	2	1980	50.	10.13	1	3
				3	1985	50.		1	3
				2	1995	35.	42.31	1	3
				3	2007	35.		1	3
				1	2020		71.88	1	3
074	MISSOURI SOUTH	1A2	112	2	1980	50.	10.	4	4
				3	1985	45.		4	4
				2	1995	40.	39.98	4	4
				3	2007	35.		4	4
				1	2020		71.5	4	4
075	MISSOURI SOUTH	1B2	122	2	1980	25.	10.	4	4
				3	1985	25.		4	4
				2	1995	25.	31.34	4	4
				3	2007	25.		4	4
				1	2020		47.15	4	4
076	MISSOURI SOUTH	1C2	132	2	1980	40.	10.	4	4
				3	1985	40.		4	4
				2	1995	25.	34.24	4	4
				3	2007	25.		4	4
				1	2020		57.98	4	4
077	MISSOURI SOUTH	1D2	142	2	1980	50.	10.	4	4

				3	1985	50.		4		4	
				2	1995	35.	41.8	4		4	
				3	2007	30.		4		4	
				1	2020		70.93	4		4	
078	MISSOURI SOUTH	3A	310	2	1980	55.	11.62	1		8	
				3	1985	50.		1		8	
				2	1995	30.	46.34	1		8	
				3	2007	40.		1		8	
				1	2020		80.36	1		8	
079	MISSOURI SOUTH	3B	320	2	1980	35.	13.03	1		8	
				3	1985	35.		1		8	
				2	1995	30.	43.56	1		8	
				3	2007	30.		1		8	
				1	2020		62.63	1		8	
080	MISSOURI SOUTH	3C	330	2	1980	45.	11.62	1		8	
				3	1985	45.		1		8	
				2	1995	30.	40.6	1		8	
				3	2007	25.		1		8	
				1	2020		66.43	1		8	
081	MISSOURI SOUTH	3D	340	2	1980	55.	11.65	1		8	
				3	1985	55.		1		8	
				2	1995	35.	48.26	1		8	
				3	2007	35.		1		8	
				1	2020		79.53	1		8	
082	PLATTE WEST	2A	210	2	1980	50.	10.34	4		7	
				3	1985	45.		4		7	
				2	1995	40.	41.35	4		7	
				3	2007	40.		4		7	
				1	2020		73.73	4		7	
083	PLATTE WEST	2B	220	2	1980	35.	11.5	4		7	
				3	1985	30.		4		7	
				2	1995	30.	37.42	4		7	
				3	2007	25.		4		7	
				1	2020		55.74	4		7	
084	PLATTE WEST	2C	230	2	1980	40.	10.34	4		7	
				3	1985	35.		4		7	
				2	1995	35.	35.61	4		7	
				3	2007	25.		4		7	
				1	2020		60.17	4		7	
085	PLATTE WEST	2D	240	2	1980	50.	10.34	4		7	
				3	1985	50.		4		7	
				2	1995	35.	43.17	4		7	
				3	2007	35.		4		7	
				1	2020		72.64	4		7	
086	NEWHAWKA	7F2	762	2	1985	.2	.07	2	3	6	12
				1	2020		.11	2		6	12
087	UNION	7F2	762	2	1985	.12	.03	2	3	6	12
				1	2020		.03	2		6	12
088	PLATTSMOUTH	2E2	252	3	1973	3.		2	3	5	
				1	1975		.939	2		5	
				1	1985		1.139	2		5	
				2	1995	.8	1.316	2	2	5	
				1	2020		1.369	2		5	
089	PLATTSMOUTH	2E2	252	3	1973	3.		2	3	5	
				1	1975		.939	2		5	
				2	1985	3.9	2.289	2	4	5	
				2	1995	.75	3.616	2	1	5	
				3	2007	.8		2	1	5	
				1	2020		3.869	2		5	

100	WASH CO RWD 4	7E	750	2	1985	.215	.105
				1	2020		.105
101	FT CALHOUN	7E	750	2	1985	.85	.307
				2	1995	.13	.35
				1	2020		.422
102	FT CALHOUN	7B	720	2	1985	2.7	.712
				2	1995	.55	1.161
				2	2007	.5	1.876
				1	2020		2.591
103	WASHINGTON	5F	560	2	1985	.2	.07
				1	1995		.075
				1	2020		.092
104	SW WASH CO	5F	560	2	1985	1.15	.428
				1	1995		.467
				1	2020		.496
105	S WASH CO	5F	560	2	1985	1.7	.694
				1	1995		.736
				1	2020		.765
106	WASH CO RWD 8	5F	560	2	1985	1.1	.54
				1	2020		.54
107	WASH CO RWD 7	5F	560	2	1985	.55	.249
				1	2020		.252
108	LOGAN	1F	160	2	1985	.75	.18
				1	1995		.242
				1	2020		.25
109	HARRISON RWD 5	1F	160	2	1985	.12	.057
				1	2020		.057
110	PERSIA	5F	560	2	1985	.26	.123
				1	2020		.123
111	MO VALLEY	2E	250	2	1975	1.2	.432
				2	1985	1.2	1.047
				2	1995	.250	1.112
				1	2020		1.171
112	MO VALLEY	2B	220	2	1975	2.5	.432
				2	1985	2.5	1.591
				2	1995	.4	2.2
				1	2020		2.325

113	HARRISON RWD 1	5F	560	2	1985	.7	.33
				1	2020		.33
114	MAGNOLIA	2F	260	2	1985	1.7	.646
				1	1995		.678
				1	2020		.686
115	LITTLE SIOUX	2F	260	2	1985	2.25	.802
				1	1995		.865
				1	2020		.885
116	PISGAH	2F	260	2	1985	2.15	.775
				1	1995		.833
				1	2020		.853
117	WOODBINE	3F	360	2	1985	1.3	.514
				1	1995		.539
				1	2020		.542
118	LOGAN	3F	360	2	1985	1.15	.51
				1	1995		.517
				1	2020		.517
119	MO VALLEY	3E	350	2	1975	1.2	.432
				1	1984		.5
				2	1985	5.	2.394
				2	1995	.2	2.556
				1	2020		2.642
120	MO VALLEY	3B	320	2	1975	2.45	.432
				1	1984		1.05
				2	1985	6.25	2.754
				2	1995	.4	3.644
				1	2020		3.796
121	POTT CO RWD1	1F	160	2	1985	.65	.319
				1	2020		.319
122	POTT CO RWD2	1F	160	2	1985	.5	0.
				1	2020		0.
123	POTT CO RWD3	1F	160	2	1985	.8	.412
				1	2020		.412
124	POTT CO RWD4	1F	160	2	1985	.41	.195
				1	2020		.197
125	POTT CO RWD5	1F	160	2	1985	.55	.268
				1	2020		.268
126	POTT CO RWD6	1F	160	2	1985	.5	.432
				1	2020		.432
127	POTT CO RWD7	1F	160	2	1985	.3	.15
				1	2020		.15
128	POTT CO RWD8	1F	160	2	1985	.8	.368
				2	1995	.25	.44
				3	2007	.25	
				1	2020		.545
129	CARSON	8F	860	2	1985	.9	.44
				1	2020		.444
130	OAKLAND	8F	860	2	1985	.85	.4
				1	2020		.4
131	AVOCA	8F	860	2	1985	1.3	.6
				1	1995		.62
				1	2020		.65
132	MCCLELLAND	8F	860	2	1985	4.9	2.17
				1	1995		2.23
				1	2020		2.29
133	NEOLA	8F	860	2	1985	4.25	1.9
				2	1995	.3	2.03
				1	2020		2.2
134	WESTON	8F	860	2	1985	.7	.37
				1	2020		.37

135	HONEY CREEK	8F 860	2	1985	.55	.25
			1	2020		.25
136	GLENWOOD	1E 150	2	1975	4.5	1.448
			2	1985	1.7	2.206
			2	1995	1.2	2.965
			3	2007	1.2	
			1	2020		4.17
137	GLENWOOD	1B 120	2	1975	5.	1.448
			2	1985	2.1	2.405
			2	1995	1.1	3.362
			3	2007	1.1	
			1	2020		4.44
138	MILLS CO RWD1-N	1F 160	2	1985	.27	.136
			1	2020		.136
139	MILLS CO RWD1-S	1F 160	2	1985	.11	.054
			1	2020		.054
140	MILLS CO RWD2-N	1F 160	2	1985	.4	.2
			1	2020		.2
141	MILLS CO RWD2-S	1F 160	2	1985	.18	.09
			1	2020		.09
142	MILLS CO RWD3	1F 160	2	1985	.27	.135
			1	2020		.135
143	EMERSON	8F 860	2	1985	.65	.276
			1	1995		.289
			1	2020		.295
144	HENDERSON	8F 860	2	1985	.22	.094
			1	2020		.096
145	NW MILLS CO	8F 860	2	1985	.45	.217
			1	2020		.217
146	SW MILLS CO	8F 860	2	1985	.45	.217
			1	2020		.217
147	GLENWOOD EAST	2F 260	2	1985	2.9	1.241
			1	1995		1.284
			1	2020		1.304
149	GLENWOOD	2E 250	2	1975	4.5	1.448
			1	1984		2.2
			2	1985	4.5	3.225
			2	1995	1.25	4.249
			3	2007	1.25	
			1	2020		5.474
150	GLENWOOD	2B 220	2	1975	5.	1.448
			1	1984		2.4
			2	1985	5.	3.646
			2	1995	1.05	4.646
			3	2007	1.05	
			1	2020		5.744
151	SILVER CITY	3F 360	2	1985	.51	.239
			1	2020		.241
152	NORTH MILLS CO	3F 360	2.	1985	1.050	.485
			1	2020		.487
153	GLENWOOD EAST	3F 360	2	1985	1.85	.83
			2	1995	.15	.87
			1	2020		.89

154	GLENWOOD	3E	350	2	1975	4.5	1.448
				1	1984		2.2
				2	1985	3.6	3.03
				2	1995	1.2	3.835
				3	2007	1.2	
				1	2020		5.06
155	GLENWOOD	3B	320	2	1975	5.	1.448
				1	1984		2.4
				2	1985	4.	3.235
				2	1995	1.1	4.232
				3	2007	1.1	
				1	2020		5.33
156	CASS CO RWD1-1	5F	561	3	1974	.504	
				1	1975		.15
				2	1995	.1	.24
				1	2020		.24
157	CASS CO RWD1-2	5F	561	3	1974	.36	
				1	1975		.12
				2	1995	.115	.19
				1	2020		.19
158	OTOE CO RWD3	5F	561	2	1978	.36	.061
				1	1985		.124
				1	2020		.147
159	CASS CO RWD 3-1	5F	560	2	1985	.36	.102
				1	2020		.148
160	CASS CO RWD 3-2	1F	160	2	1985	.33	.12
				1	2020		.143
161	CASS CO RWD3-3	5F	560	2	1985	.82	.309
				2	1995	.11	.339
				1	2020		.384
162	CASS CO RWD3-4	1F	160	2	1985	1.36	.530
				2	1995	.15	.577
				1	2020		.636
163	CASS CO RWD3-2	8F	860	2	1985	.72	.277
				2	1995	.1	.31
				1	2020		.35
164	CASS CO RWD 3-4	8F	860	2	1985	1.8	.687
				2	1995	.2	.756
				1	2020		.843
165	MUD BEDFORD	5F	560	3	1959	16.	
				1	1975		4.133
				1	1995		5.
				1	2020		5.
166	MUD MORMAN	5F	560	3	1962	12.	
				1	1975		4.921
				1	1995		5.

					1	2020		5.
167	MUD	POPPLETON	5F	560	3	1962	39.	
					1	1975		4.854
					1	1995		5.
					1	2020		5.
168	MUD	WALNUT HILL	5F	560	3	1966	64.	
					1	1975		5.781
					1	1995		10.
					1	2020		15.
169	MUD	TURNER	5F	560	3	1954	50.	
					1	1975		17.89
					1	1995		18.
					1	2020		18.
170	MUD	CORNHUSKER	5A&D	580	3	1972	4.5	
					1	1975	4.5	.51
					1	1995		1.5
					1	2020		2.
171	MUD	CORNHUSKER	5B&C	570	3	1972	4.5	
					1	1975	4.5	.51
					1	1995		1.6
					1	2020		2.5
172	MUD	78TH ST	5F	560	3	1969	29.	
					1	1975		11.742
					1	1995		12.
					1	2020		12.
173	MUD	HARRISON	7A	710	3	1966	30.	
					1	1975		5.55
					2	1995	40	10.48
					1	2020		18.23
174	MUD	HARRISON	7B	720	3	1966	30.	
					1	1975		5.55
					2	1995	40.	9.98
					1	2020		22.85
175	MUD	HARRISON	7C	730	3	1966	30.	
					1	1975		5.55
					2	1995	40.	15.72
					1	2020		27.41
176	MUD	HARRISON	7D	740	3	1966	30.	
					1	1975		5.55
					2	1995	40.	10.7
					1	2020		17.69
177	MUD	HARTMAN	5A	510	3	1955	6.	
					1	1975	6.	2.529
					2	1985	15.	6.505
					1	1995		10.48
					3	2007	50.	
					1	2020		18.23
178	MUD	HARTMAN	5B	520	3	1955	6.	
					1	1975	6.	2.529
					2	1985	20.	6.254
					1	1995		9.98
					3	2007	50.	
					1	2020		22.85
179	MUD	HARTMAN	5C	530	3	1955	6.	
					1	1975	6.	2.529
					2	1985	40.	9.125

					1	1995		15.72
					3	2007	70.	
					1	2020		27.41
180	MUD	HARTMAN	5D	540	3	1955	6.	
					1	1975	6.	2.529
					2	1985	15.	6.615
					1	1995		10.7
					3	2007	40.	
					1	2020		17.69
181	MUD	HARRISON	2A	210	3	1966	30.	
					1	1975		5.55
					1	1995		6.48
					1	2020		7.23
182	MUD	HARRISON	2B	220	3	1966	30.	
					1	1975		5.55
					1	1995		5.98
					1	2020		11.85
183	MUD	HARRISON	2C	230	3	1966	30.	
					1	1975		5.55
					1	1995		11.72
					1	2020		16.41
184	MUD	HARRISON	2D	240	3	1966	30.	
					1	1975		5.55
					1	1995		6.7
					1	2020		6.7
185	MUD	RAINWOOD	1A	110	2	1975	40.	3.58
					1	1995		6.49
					1	2020		11.75
186	MUD	RAINWOOD	1B	120	2	1975	40.	3.58
					1	1995		7.01
					1	2020		11.31
187	MUD	RAINWOOD	1C	130	2	1975	40.	3.58
					1	1995		4.42
					1	2020		8.3
188	MUD	RAINWOOD	1D	140	2	1975	40.	3.58
					1	1995		5.5
					1	2020		10.92
189	MUD	RAINWOOD	2A	210	2	1975	40.	3.58
					1	1995		6.81
					1	2020		11.84
190	MUD	RAINWOOD	2B	220	2	1975	40.	3.58
					1	1995		8.14
					1	2020		12.87
191	MUD	RAINWOOD	2C	230	2	1975	40.	3.58
					1	1995		4.74
					1	2020		8.69
192	MUD	RAINWOOD	2D	240	2	1975	40.	3.58
					1	1995		5.82
					1	2020		11.31
193	MUD	RAINWOOD	3A	310	2	1975	40.	3.58
					1	1995		7.3
					1	2020		12.63
194	MUD	RAINWOOD	3B	320	2	1975	40.	3.58
					2	1995	20.	10.38
					1	2020		15.97
195	MUD	RAINWOOD	3C	330	2	1975	40.	3.58

				1	1995		5.23
				1	2020		9.48
196	MUD RAINWOOD	3D	340	2	1975	40.	3.58
				1	1995		6.31
				1	2020		11.59
197	MUD 132ND ST	7A	710	3	1962	30.	
				1	1975		2.153
				1	1995		7.25
				3	2007	20.	
				1	2020		15.33
198	MUD 132ND ST	7B	720	3	1962	30.	
				1	1975		2.153
				1	1995		5.99
				1	2020		8.91
199	MUD 132ND ST	7C	730	3	1962	30.	
				1	1975		2.153
				1	1995		7.29
				1	2020		9.7
200	MUD 132ND ST	7D	740	3	1962	30.	
				1	1975		2.153
				1	1995		6.94
				3	2007	10.	
				1	2020		12.64
201	MUD 132ND ST	2A	210	3	1962	30.	
				1	1975		2.153
				1	1995		9.25
				3	2007	40.	
				1	2020		19.33
202	MUD 132ND ST 2B		220	3	1962	30.	
				1	1975		2.153
				1	1995		9.99
				3	2007	40.	
				1	2020		19.91
203	MUD 132ND ST	2C	230	3	1962	30.	
				1	1975		2.153
				3	1985	20.	
				1	1995		11.29
				1	2020		13.7
204	MUD 132ND ST	2D	240	3	1962	30.	
				1	1975		2.153
				1	1995		8.94
				3	2007	40.	
				1	2020		19.64
205	MUD FORT ST	7A	710	2	1985	20.	1.71
				1	1995		3.42
				3	2007	20.	
				1	2020		10.41
206	MUD FORT ST	7C	730	2	2007	15.	2.125
				1	2020		2.86
207	MUD FORT ST	7D	740	2	1985	10.	1.505
				1	1995		3.01
				3	2007	20.	
				1	2020		7.42
208	MUD FORT ST	2A	210	2	1985	20.	2.71
				1	1995		5.42
				3	2007	40.	

				1	2020		17.41
209	MUD FORT ST	2C	230	2	2007	30.	4.93
				1	2020		9.86
210	MUD FORT ST	2D	240	2	1985	20.	2.505
				1	1995		5.01
				3	2007	20.	
				1	2020		11.42
211	MUD I-80	1A1	110	2	1985	50.	9.7
				2	1995	50.	19.4
				3	2007	50.	
				1	2020		42.45
212	MUD I-80	1B1	120	2	1985	40.	6.88
				2	1995	25.	13.76
				1	2020		19.2
213	MUD I-80	1C1	130	2	1985	30.	5.78
				2	1995	30.	11.56
				3	2007	20.	
				1	2020		22.73
214	MUD I-80	1D1	140	2	1985	50.	10.435
				2	1995	50.	20.87
				3	2007	47.	
				1	2020		42.09
215	MUD I-80	1A2	112	2	1985	50.	9.45
				2	1995	50.	18.89
				3	2007	45.	
				1	2020		41.5
216	MUD I-80	1B2	122	2	1985	30.	5.23
				2	1995	20.	10.46
				1	2020		14.76
217	MUD I-80	1C2	132	2	1985	30.	5.58
				2	1995	30.	11.05
				3	2007	14.	
				1	2020		21.78
218	MUD I-80	1D1	142	2	1985	50.	10.18
				2	1995	50.	20.36
				3	2007	40.	
				1	2020		41.14
219	MUD I-80	3A	310	2	1985	50.	9.7
				2	1995	50.	19.4
				3	2007	50.	
				1	2020		42.45
220	MUD I-80	3B	320	2	1985	40.	6.88
				2	1995	25.	13.76
				1	2020		19.2
221	MUD I-80	3C	330	2	1985	30.	5.78
				2	1995	30.	11.56
				3	2007	20.	
				1	2020		22.73
222	MUD I-80	3D	340	2	1985	50.	10.435
				2	1995	50.	20.87
				3	2007	47.	
				1	2020		42.09
223	BENNINGTON	5E	550	2	1985	1.25	.293
				2	1995	.4	.49
				1	2020		.66
224	BENNINGTON	5B	520	2	1980	6.	.691

				2	1995	1.225	2.475
				3	2007	1.	
				1	2020		3.461
225	SPRINGFIELD	2E	250	2	1985	1.25	.303
				2	1995	.65	.507
				3	2007	.5	
				1	2020		.954
226	SPRINGFIELD	2B	220	2	1985	7.8	1.575
				2	1995	1.35	3.3
				3	2007	1.35	
				1	2020		4.438
227	GRETNA 5A&D		580	2	1980	6.	.393
				2	1995	3.	.99
				3	2007	3.	
				1	2020		3.78
228	GRETNA	5B	520	2	1980	8.	.948
				2	1995	3.	3.22
				3	2007	2.5	
				1	2020		5.38
229	GRETNA	5C	530	2	1980	2.5	.393
				2	1995	1.	.99
				3	2007	1.	
				1	2020		1.78
230	CB MT LINCCLN	5A-D	580	3	1960	3.2	
				1	1975	3.2	.49
				1	1995		.49
				1	2020		.63
231	CB MT LINCCLN	5B	520	3	1960	3.2	
				1	1975	3.2	.49
				1	1995		.49
				1	2020		.63
232	CB MT LINCCLN	5C	530	3	1960	3.2	
				1	1975	3.2	.49
				1	1995		.82
				1	2020		.62
233	CB GLENDALE	5A	510	3	1952	2.8	
				1	1975	2.8	.54
				1	1995		.93
				2	2007	1.9	1.21
				1	2020		1.5
234	CB GLENDALE	5B	520	3	1952	2.8	
				1	1975	2.8	.54
				1	1995		.75
				1	2020		.93
235	GLENDALE	5C	530	3	1952	2.8	
				1	1975	2.8	.54
				1	1995		.88
				2	2007	1.6	1.1
				1	2020		1.33
236	GLENDALE	5D	540	3	1952	2.8	
				1	1975	2.8	.54
				1	1995		1.
				2	2007	2.6	.33
				1	2020		1.67
237	CB OAK ST	5A	510	3	1960	2.7	
				1	1975	2.7	.54

				1	1995		.97
				2	2007	2.	1.26
				1	2020		1.56
238	CB OAK ST	5B	520	3	1960	2.7	
				1	1975	2.7	.54
				1	1995		.79
				1	2020		.99
239	CB OAK ST	5C	530	3	1960	2.7	
				1	1975	2.7	.54
				1	1995		.92
				2	2007	1.5	1.16
				1	2020		1.39
240	CB OAK ST	5D	540	3	1960	2.7	
				1	1975	2.7	.54
				1	1995		1.04
				2	2007	2.5	1.38
				1	2020		1.73
241	CB ISO	5A	510	2	1985	2.8	.89
				1	1995		1.09
				2	2007	1.3	1.36
				1	2020		1.63
242	CB ISO	5B	520	2	1985	1.	.8
				1	1995		.91
				2	2007	1.5	.98
				1	2020		1.06
243	CB ISO	5C	530	2	1985	2.1	.8
				1	1995		.91
				2	2007	1.3	1.14
				1	2020		1.37
244	CB ISO	5D	540	2	1985	2.9	.92
				1	1995		1.15
				2	2007	1.6	1.47
				1	2020		1.79
245	CB EAST BELLEVUE	6B	620	2	1980	3.	.29
				1	1995		1.155
				1	2020		1.243
246	CB POT RURAL	8F	860	2	1985	11.	5.073
				2	1995	1.	5.5
				1	2020		5.68
247	EAST BELLEVUE	3B	320	2	1985	2.7	.577
				2	1995	.2	1.155
				1	2020		1.243
248	CASS CO RWD1-1	7F2	762	3	1974	.504	
				1	1975		.15
				2	1995	.1	.24
				1	2020		.24
249	CASS CO RWD1-2	7F2	762	3	1974	.36	
				1	1975		.12
				2	1995	.115	.19
				1	2020		.19
250	OTOE CO RWD3	5F2	562	2	1978	.868	.255
				2	1995	.138	.343
				1	2020		.402
251	CASS CO RWD1-1	2F2	262	3	1974	.504	
				1	1975		.15
				2	1985	.21	.264
				2	1995	.1	.317
				1	2020		.324
252	CASS CO RWD1-2	2F2	262	3	1974	.36	
				1	1975		.12
				2	1985	.21	.224
				2	1995	.115	.267
				1	2020		.274

STORAGE FACILITIES

300	ARLINGTON	560	2	1975	.040	1
		560	2	1985	.165	1
		560	2	1995	.010	1
301	BLAIR	550	2	1975	.900	4
		550	2	1985	1.650	4
		550	2	1995	.170	4
302	FORT CALHOUN	550	2	1975	.250	3
		550	2	1985	.200	3
		550	2	1995	.050	3
303	HERMAN	560	2	1975	.058	2
304	KENNARD	560	2	1975	.033	2
		560	2	1985	.010	2
305	WASHINGTON	560	2	1985	.020	1
		560	2	1995	.015	1
306	DUNLAP	560	2	1975	.045	2
		560	2	1985	.125	2
307	LITTLE SIOUX	560	2	1975	.067	2
308	LOGAN	560	2	1975	.120	3
		560	2	1985	.125	3
309	MAGNOLIA	560	2	1975	.014	2
		560	2	1985	.01	2
310	MISSOURI VALLEY	550	2	1975	.3	4
		550	2	1985	.25	4
		550	2	1995	.075	4
311	MODALE	560	2	1975	.025	1
		560	2	1985	.015	1
312	MONDAMIN	560	2	1975	.065	1
313	PERSIA	560	2	1975	.077	1
314	PISGAH	560	2	1975	.04	4
315	WOODBINE	560	2	1975	.11	1
		560	2	1985	.1	1
316	AVOCA	560	2	1975	.05	4
316	AVOCA-1	560	2	1975	.1	1
		560	2	1985	.2	1
		560	2	1995	.05	1
317	CARSON	560	2	1975	.033	1
		560	2	1985	.1	1
318	CRESENT	560	2	1975	.05	3
		560	2	1985	.01	3
319	HANCOCK	560	2	1975	.04	3
		560	2	1985	.025	3
320	MACEDONIA	560	2	1975	.03	1
		560	2	1985	.02	1
321	MCCLELAND	560	2	1985	.02	1

322 MINDEN	560	2	1975	.047	2
	560	2	1985	.075	2
323 NEOLA	560	2	1975	.085	1
	560	2	1985	.075	1
	560	2	1995	.030	1
324 OAKLAND	560	2	1975	.16	4
324 OAKLAND-1	560	2	1975	.04	1
	560	2	1985	.25	1
325 TREYNOR	560	2	1975	.02	1
	560	2	1985	.2	1
	560	2	1995	.1	1
326 UNDERWOOD	560	2	1975	.03	1
	560	2	1985	.075	1
	560	2	1995	.05	1
327 WALNUT	560	2	1975	.05	1
	560	2	1985	.1	1
	560	2	1995	.03	1
328 EMERSON	560	2	1975	.05	1
	560	2	1985	.03	1
329 GLENWOOD	560	2	1975	.65	4
	560	2	1985	.65	4
329 GLENWOOD-1	560	2	1975	.15	1
329 GLENWOOD-2	560	2	1975	.35	1
	560	2	1985	.3	1
	560	2	1995	.3	1
329 GLENWOOD-3	560	2	1975	.6	3
329 GLENWOOD-4	560	2	1975	.075	3
329 GLENWOOD-5	560	2	1975	.325	3
330 HASTINGS	560	2	1975	.03	2
331 HENDERSON	560	2	1975	.03	2
332 MALVERN	560	2	1975	.065	1
	560	2	1985	.05	1
333 PACIFIC JUNCTION	560	2	1985	.06	1
334 SILVER CITY	560	2	1975	.025	2
335 TABOR	560	2	1975	.085	4
335 TABOR-1	560	2	1975	.03	1
	560	2	1985	.05	1
336 ALVO	560	2	1975	.025	1
	560	2	1985	.015	1
337 AVOCA	560	2	1975	.030	1
338 EAGLE	560	2	1975	.03	1
	560	2	1985	.075	1
339 ELMWOOD	560	2	1975	.03	1
	560	2	1985	.15	1
340 GREENWOOD	560	2	1975	.05	1
	560	2	1985	.075	1
341 LOUISVILLE	560	2	1975	.06	2
	560	2	1985	.05	2
343 MURDOCK	560	2	1975	.02	1
	560	2	1985	.05	1
344 MURRAY	560	2	1975	.036	1
345 NEHAWKA	560	2	1975	.042	4
	560	2	1985	.015	4
346 PLATTSMOUTH	550	2	1975	1.	1
346 PLATTSMOUTH-1	550	2	1975	.29	3
	550	2	1985	2.	3

		550	2	1995	.7	3
347	UNION	560	2	1975	.05	1
348	WEEPING WATER	560	2	1975	.225	3
349	BLAIR B	520	2	1975	.9	4
		520	2	1985	3.08	4
		520	2	1995	.71	4
350	MISSOURI VALLEY B	520	2	1975	.3	4
		520	2	1985	2.	4
		520	2	1995	.08	4
351	PLATTSMOUTH B	520	2	1975	1.	1
351	PLATTSMOUTH-1 B	520	2	1975	.290	3
		520	2	1985	2.3	3
		520	2	1995	.035	3
352	FORT CALHOUN B	520	2	1975	.25	3
		520	2	1985	.75	3
		520	2	1995	.42	3
353	WASH CO RWD I	660	2	1985	.1	2
354	WASH CO RWD II	660	2	1985	.07	4
354	WASH CO RWD-1 II	660	2	1985	.05	1
355	WASH CO RWD III	660	2	1985	.11	2
356	WASH CO RWD IV	760	2	1985	.14	2
357	WASH CO RWD V	660	2	1985	.085	2
358	WASH CO RWD VI	660	2	1985	.2	2
359	WASH CO RWD VII	660	2	1985	.215	2
360	WASH CO RWD VIII	660	2	1985	.54	3
361	HARR CO RWD I	660	2	1985	.225	2
361	HARR CO RWD-1 I	660	2	1985	.225	2
362	HARR CO RWD II	660	2	1985	.22	2
362	HARR CO RWD-1 II	660	2	1985	.22	2
363	HARR CO RWD III	660	2	1985	.17	2
363	HARR CO RWD-1 III	660	2	1985	.17	2
364	HARR CO RWD-2 III	660	2	1985	.17	2
364	HARR CO RWD IV	660	2	1985	.04	2
364	HARR CO RWD-1 IV	660	2	1985	.04	2
365	HARR CO RWD V	660	2	1985	.085	2
365	HARR CO RWD-1 V	660	2	1985	.085	2
366	HARR CO RWD VI	660	2	1985	.095	2
366	HARR CO RWD-2 VI	660	2	1985	.095	2
367	POTT CO RWD I	660	2	1985	.680	3
368	POTT CO RWD II	660	2	1985	.7	3
369	POTT CO RWD III	660	2	1985	.41	3
370	POTT CO RWD IV	660	2	1985	.35	3
371	POTT CO RWD V	660	2	1985	.535	3
372	POTT CO RWD VI	660	2	1985	.78	1
373	POTT CO RWD VII	660	2	1985	.535	3
374	POTT CO RWD VIII	660	2	1985	.315	3
375	MILL CO RWD I	660	2	1985	.155	3
375	MILL CO RWD-1 I	660	2	1985	.315	3
376	MILL CO RWD II	660	2	1985	.29	3
376	MILL CO RWD-1 II	660	2	1985	.175	3
376	MILL CO RWD-2 II	660	2	1985	.09	1
377	MILL CO RWD III	660	2	1985	.205	2
377	MILL CO RWD-1 III	660	2	1985	.205	2
377	MILL CO RWD-2 III	660	2	1985	.105	1
378	CASS CO RWD I	660	2	1974	.1	1
378	CASS CO RWD-1 I	660	2	1974	.2	1

379	CASS CO RWD II	660	2	1975	.045	1
380	CASS CO RWD III	660	2	1985	.09	2
380	CASS CO RWD-1 III	660	2	1985	.09	2
380	CASS CO RWD-2 III	660	2	1985	.095	2
381	OTOE CO RWD III	660	2	1975	.15	1
382	GRETNA A&D	580	2	1975	.7	3
		580	2	1985	1.25	3
		580	2	1995	1.	3
		580	2	2007	1.22	3
383	GRETNA B	520	2	1975	.7	3
		520	2	1985	3.4	3
		520	2	1995	.5	3
		520	2	2007	.58	3
384	GRETNA C	530	2	1975	.7	3
		530	2	1985	1.25	3
		530	2	1995	.4	3
		530	2	2007	.329	3
385	SPRINGFIELD	550	2	1975	.025	1
		550	2	1985	.5	1
		550	2	1995	.425	1
386	SPRINGFIELD B	520	2	1975	.025	1
		520	2	1985	3.5	1
		520	2	1995	.3	1
		520	2	2007	.35	1
387	PAPILLION	560	2	1975	.5	1
		560	2	1985	2.	1
		560	2	2000	1.	1
388	OFFUTT	560	2	1975	2.	4
389	BELLEVUE	560	2	1975	1.142	4
389	BELLEVUE 1	560	2	1975	.5	1
390	BENNINGTON-1	550	2	1975	.04	2
390	BENNINGTON	550	2	1975	.25	1
		550	2	1985	.2	1
		550	2	1995	.17	1
391	BENNINGTON-1 B	520	2	1975	.04	2
391	BENNINGTON B	520	2	1975	.25	1
		520	2	1985	2.7	1
		520	2	1995	.58	1
392	ELKHORN-1	550	2	1975	.047	4
392	ELKHORN	550	2	1975	.033	1
		550	2	1985	.3	1
		550	2	1995	.136	1
393	ELKHORN-1 B	520	2	1975	.47	4
393	ELKHORN B	520	2	1975	.033	1
		520	2	1985	1.	1
		520	2	1995	1.	1
		520	2	2007	.77	1
394	VALLEY	550	2	1975	.025	1
		550	2	1985	.325	1
		560	2	1995	.185	1
395	VALLEY B	520	2	1975	.025	1
		520	2	1985	1.4	1
		520	2	1995	.34	1

396	WATERLOO	560	2	1975	.04	1
		560	2	1985	.034	1
		560	2	1995	.056	1
397	DEER CREEK	520	2	1985	.85	1
		520	2	1995	.4	1
398	FLORENCE PREC	520	2	1985	.33	1
399	EAST BELLEVUE	520	2	1985	1.1	1
		520	2	1995	.15	1
400	MUD WALNUT HILL	560	3	1970	24.	4
			1	1975	24.	4
401	MUD FIELD CLUB	560	3	1954	25.	4
			1	1975	25.	4
402	MUD 132ND ST	560	3	1962	6.	4
			1	1975	6.	4
403	MUD 36TH & HARRISON	560	2	1985	10.	3
404	MUD NO. OMAHA	560	3	1959	.05	1
			1	1975	.05	1
405	MUD RAINWOOD RD	560	2	1985	20.	4
		560	2	1995	10.	4
		560	2	2007	10.	4
406	MUD 132ND ST	560	2	1985	15.	4
407	MUD 132ND ST A	510	2	2007	7.	4
408	MUD 132ND ST C	530	2	2007	3.	4
409	MUD 132ND ST D	540	2	2007	5.	4
410	MUD FORT ST E	550	2	1985	23.	4
411	MUD I-80 I&III	660	2	1985	12.	4
		660	2	1995	15.	4
		660	2	2007	16.	4
412	MUD I-80 I&III E	650	2	1995	5.	4
413	MUD 78TH HARRISON II	260	2	1985	12.	4
		260	2	1995	15.	4
		260	2	2007	16.	4
414	MUD 78&HARRISON IIE	250	2	1995	5.	4
415	CB MT LINCOLN	560	3	1960	2.	4
			1	1975	2.	4
416	CB GLENDALE	560	3	1952	2.	4
			1	1975	2.	4
417	CB MEMORIAL PARK	560	3	1955	0.2	1
			1	1975	.2	1
418	CB SIMMS	560	3	1955	.2	1
			1	1975	.2	1
419	CB GRAND AVE	560	2	1985	.4	1
420	CB GRAND AVE E	550	2	2007	.3	1
421	CB CRESTVIEW A	510	2	1995	.4	1
422	CB CRESTVIEW B&C	570	2	1995	.2	1
423	CB CRESTVIEW D	540	2	1995	.5	1
424	CB ISD	560	2	1985	1.	3
425	CB ISD E	550	2	1995	.5	3
426	CB ISD A	510	2	2007	.4	3
427	CB ISD B	520	2	2007	.4	3
428	CB ISD C	530	2	2007	.3	3
429	CB ISD D	540	2	2007	.5	3

550	ARLINGTON	560	910	1345	1446	400.000	4.
551	BLAIR	550	6106	9343	10393	400.000	4.
552	FT. CALHOUN	550	642	1353	1708	400.000	4.
553	KENNARD	560	336	341	311	400.000	4.
554	WASHINGTON	560	76	149	284	400.000	4.
555	HERMAN	560	323	311	284	400.000	4.
556	DUNLAP	560	1292	1485	1511	400.000	4.
557	LITTLE SIOUX	560	239	283	283	400.000	4.
558	LOGAN	560	1526	1781	1844	400.000	4.
559	MAGNOLIA	560	206	204	180	400.000	4.
560	MISSOURI VALLEY	550	3519	3930	4341	400.000	4.
561	MODALE	560	297	275	250	400.000	4.
562	MODAMIN	560	420	395	314	400.000	4.
563	PERSIA	560	316	305	285	400.000	4.
564	PISGAH	560	286	312	312	400.000	4.
565	WOODBINE	560	1349	1700	1848	400.000	4.
566	AVOCA	560	1535	1449	1387	400.000	4.
567	CARSON	560	756	900	912	400.000	4.
568	CRESENT	560	284	410	560	400.000	4.
569	HANCOCK	560	228	270	280	400.000	4.
570	MACEDONIA	560	330	435	470	400.000	4.
571	MCCLELLAND	560	146	150	156	400.000	4.
572	MINDEN	560	433	525	540	400.000	4.
573	NEOLA	560	968	1200	1395	400.000	4.
574	OAKLAND	560	1603	1820	2060	400.000	4.
575	TREYNOR	560	472	1350	1929	400.000	4.
576	UNDERWOOD	560	424	820	1028	400.000	4.
577	WALNUT	560	870	1050	1200	400.000	4.
578	EMERSON	560	484	574	620	400.000	4.
579	GLENWOOD	550	4421	6800	8892	400.000	4.
580	HASTINGS	560	229	130	85	400.000	4.
581	HENDERSON	560	211	190	170	400.000	4.
582	MALVERN	560	1158	1026	896	400.000	4.
583	PACIFIC JUNCTION	560	505	449	393	400.000	4.
584	SILVER CITY	560	272	223	174	400.000	4.
585	TABOR	560	957	1067	1177	400.000	4.
586	ALVO	560	151	136	124	400.000	4.
587	AVOCA	560	229	271	280	400.000	4.
588	EAGLE	560	441	778	983	400.000	4.
589	ELMWOOD	560	548	757	902	400.000	4.
590	GREENWOOD	560	506	868	1097	400.000	4.
591	LOUISVILLE	560	1036	890	813	400.000	4.
592	MANLEY	560	150	265	335	400.000	4.
593	MURDOCK	560	262	314	328	400.000	4.
594	MURRAY	560	286	327	327	400.000	4.
595	NEHAWKA	560	298	389	444	400.000	4.

596	PLATTSMOUTH	550	6371	7684	8035	400.000	4.
597	UNION	560	275	244	223	400.000	4.
598	WEEPING WATER	560	1143	1374	1446	400.000	4.
599	WATERLOO	560	455	545	814	400.000	4.
600	GRETNA C	530	1557	7365	13208	400.000	4.
601	SPRINGFIELD E	550	795	3378	6362	400.000	4.
602	BENNINGTON E	550	683	2385	3144	400.000	4.
603	ELKHORN A	510	1184	2851	3819	400.000	4.
604	VALLEY E	550	1595	2555	3325	400.000	4.
605	GRETNA A&D	580	1557	7365	000000	400.000	4.
606	ELKHORN C	530	1184	2851	3819	400.000	4.
607	ELKHORN D	540	1184	2851	000000	400.000	4.
609	FT CALHOUN B	520	642	6000	8000	280.000	2.9
608	BLAIR B	520	6106	24000	30000	280.000	3.
610	MISSOURI VALLEY B	520	3519	10000	10000	280.000	3.15
611	GLENWOOD B	520	4421	10000	10000	280.000	3.1
612	PLATTSMOUTH B	520	6371	20000	20000	280.000	3.05
613	SPRINGFIELD B	520	795	20000	25000	280.000	2.8
614	GRETNA B	520	1557	25000	35000	280.000	2.85
615	ELKHORN B	520	1184	15000	19500	280.000	2.9
616	VALLEY B	520	1595	5000	6000	280.000	3.05
617	BENNINGTON B	520	683	15000	19500	280.000	2.85
618	FLORENCE PREC B	520	000000	2000	2000	280.000	2.8
619	DEER CREEK B	520	000000	5000	7000	280.000	2.8
620	EAST BELLEVUE B	520	000000	7000	7000	280.000	2.8
621	METRO OMAHA A	510	429762	732195	896343	300.000	3.
622	METRO OMAHA B	520	429762	623972	759925	245.000	2.75
623	METRO OMAHA C	530	429762	729871	882832	240.000	2.65
624	METRO OMAHA D	540	429762	721620	880508	295.000	2.95
625	COUNCIL BLUFFS	510	59932	75350	94570	300.000	3.
626	COUNCIL BLUFFS	520	59932	75920	82195	245.000	2.75
627	COUNCIL BLUFFS	530	59932	75350	91294	240.000	2.65
628	COUNCIL BLUFFS	540	59932	75350	98015	295.000	2.95

AD-A041 937 ARMY ENGINEER DISTRICT OMAHA NEBR F/G 8/6
WATER AND RELATED LAND RESOURCES MANAGEMENT STUDY. VOLUME V. SU--ETC(U)
JUN 75

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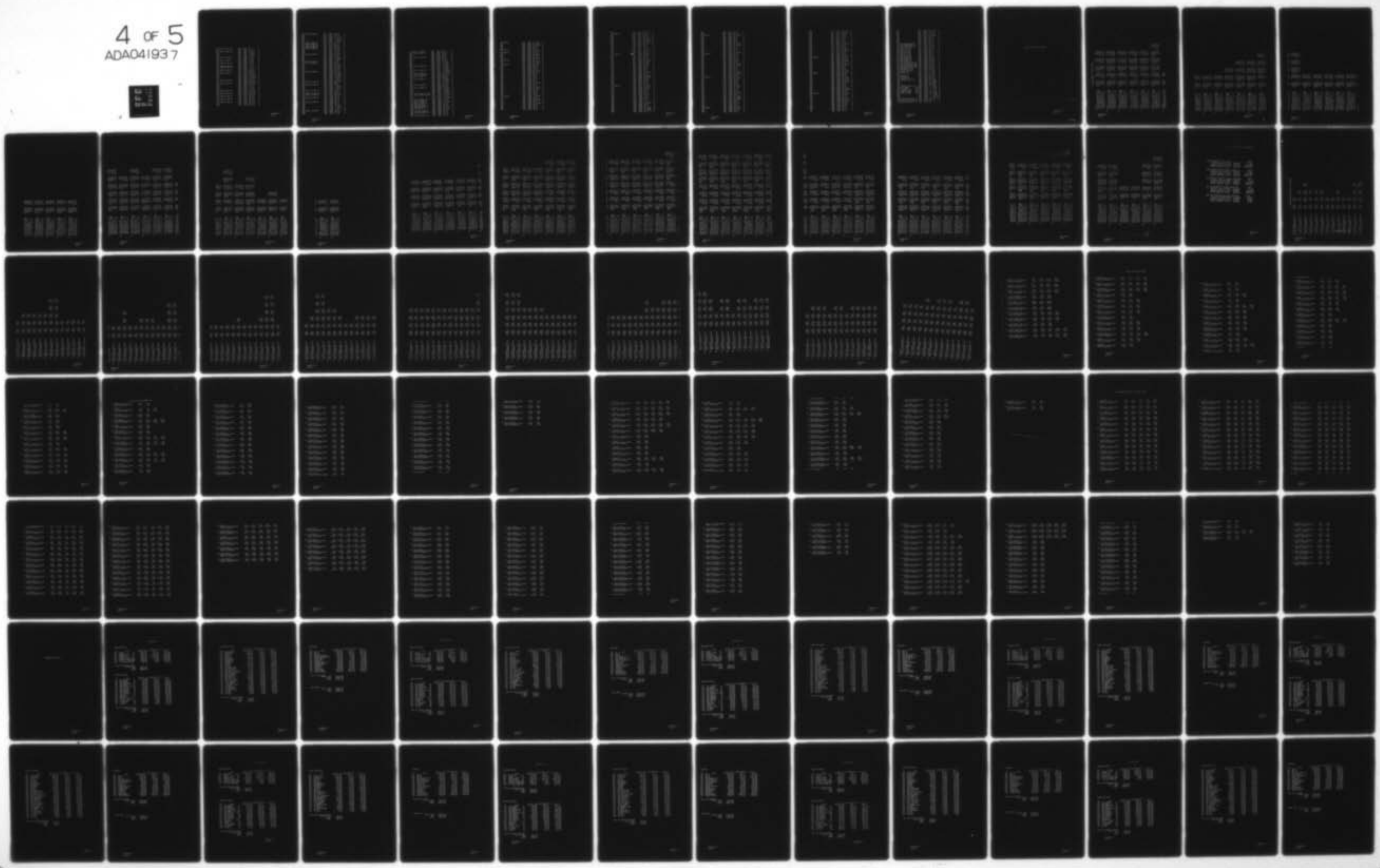

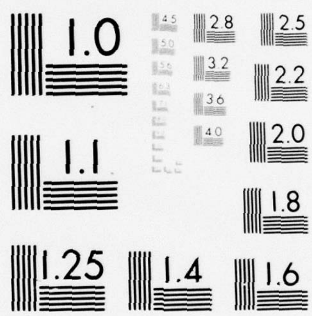

MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

629	WASH CO RWD ALL	560	1985	12	1.	2
629		560	1985	10	.8	2
630	WASH CO RWD ALL	560	1985	10	12.1	3
630		560	1985	8	15.	3
630		560	1985	6	18.3	3
630		560	1985	4	10.2	3
631	WASH CO RWD 7E	750	1980	10	7.2	3
631		750	1980	8	3.	3
632	WASH CO RWD 7F	760	1985	6	5.5	3
632		760	1985	4	2.2	3
633	WASH CO RWD 7B	720	1980	24	7.5	3
633		720	1980	8	2.7	3
634	WASH CO RWD 2F	260	1985	4	7.8	3
635	HARR CO RWD ALL	560	1985	6	9.	3
635		560	1985	4	14.5	3
636	HARR CO RWD 1F	160	1985	12	4.5	2
636		160	1985	10	5.25	2
637	HARR CO RWD 1F	160	1985	12	4.5	3
637		160	1985	10	5.25	3
637		160	1985	8	10.15	3
637		160	1985	6	38.16	3
637		160	1985	4	4.8	3
638	HARR CO RWD 2F	260	1985	12	11.9	2
638		260	1985	10	7.75	2
639	HARR CO RWD 2F	260	1985	12	11.9	3
639		260	1985	10	7.75	3
639		260	1985	8	10.	3
639		260	1985	6	6.4	3
639		260	1985	4	17.5	3
640	HARR CO RWD 2E	250	1975	16	7.12	2
640		250	1975	12	1.25	2
641	HARR CO RWD 2E	250	1975	16	7.12	3
641		250	1975	12	1.25	3
642	HARR CO RWD 2B	220	1975	20	5.7	2
642		220	1975	16	2.62	2
643	HARR CO RWD 2B	220	1975	20	5.7	3
643		220	1975	16	2.62	3
644	HARR CO RWD 3F	360	1985	16	4.26	2
644		360	1985	12	6.1	2
644		360	1985	10	6.98	2

645	HARR CO RWD 3F	360	1985	16	4.26	3
645		360	1985	12	6.1	3
645		360	1985	10	6.98	3
645		360	1985	8	16.92	3
645		360	1985	6	14.72	3
645		360	1985	4	14.84	3
646	HARR CO RWD 3E	350	1975	24	4.8	2
647	HARR CO RWD 3E	350	1975	24	4.8	3
648	HARR CO RWD 3B	320	1975	30	4.8	2
649	HARR CO RWD 3B	320	1975	30	4.8	3
650	POTT CO RWD 1F	160	1985	12	5.83	2
650		160	1985	10	5.77	2
650		160	1985	8	4.6	2
650		160	1985	6	5.3	2
651	POTT CO RWD 1F	160	1985	12	5.83	3
651		160	1985	10	5.	3
651		160	1985	8	34.6	3
651		160	1985	6	89.6	3
651		160	1985	4	26.6	3
652	POTT CO RWD 2F	260	1985	4	7.	3
653	POTT CO RWD 8F	860	1985	30	2.5	2
653		860	1985	20	12.4	2
653		860	1985	16	6.5	2
653		860	1985	12	13.35	2
653		860	1985	10	6.65	2
653		860	1985	8	3.9	2
654	POTT CO RWD 8F	860	1985	20	12.4	3
654		860	1985	16	6.5	3
654		860	1985	12	13.35	3
654		860	1985	10	6.65	3
654		860	1985	8	18.9	3
654		860	1985	6	41.2	3
654		860	1985	4	65.2	3
655	MILLS CO RWD 1F	160	1975	20	.35	2
655		160	1975	10	3.	2
656	MILLS CO RWD 1F	160	1985	10	3.	3
656		160	1985	8	17.8	3
656		160	1985	6	65.3	3
656		160	1985	4	65.1	3
657	MILLS CO RWD 1F1	161	1975	24	2.	2
657		161	1975	12	1.4	2
658	MILLS CO RWD 1F2	162	1975	24	6.6	2
659	MILLS CO RWD 2F	260	1975	30	6.1	2
659		260	1975	20	.35	2
660	MILLS CO RWD 2F	260	1985	16	3.	2
660		260	1985	12	.8	2
660		260	1985	10	1.5	2
661	MILLS CO RWD 2F	260	1985	16	3.	3
661		260	1985	12	.8	3
661		260	1985	10	1.5	3
661		260	1985	8	27.5	3
661		260	1985	6	39.8	3
661		260	1985	4	57.	3
662	MILLS CO RWD 3F	360	1975	36	6.7	2
662		360	1975	30	3.1	2
662		360	1975	20	.35	2

663	MILLS CO RWD 3F	360	1975	36	6.7	3
664	MILLS CO RWD 3F	360	1985	16	3.	2
664		360	1985	12	.8	2
664		360	1985	10	3.5	2
665	MILLS CO RWD 3F	360	1985	16	3.	3
665		360	1985	12	.8	3
665		360	1985	10	3.5	3
665		360	1985	8	25.6	3
665		360	1985	6	31.6	3
665		360	1985	4	51.2	3
666	CASS CO RWD1 5F	560	1974	10	2.841	2
666		560	1974	8	8.58	2
666		560	1974	6	.374	2
667	CASS CO RWD1 5F	560	1974	6	5.250	3
667		560	1974	4	23.050	3
668	CASS CO RWD1 3E	350	1985	20	11.54	2
669	CASS CO RWD1 3B	320	1985	24	11.54	2
670	CASS CO RWD3 F	660	1985	12	5.3	2
670		660	1985	10	3.44	2
671	CASS CO RWD3 F	660	1985	10	2.41	3
671		660	1985	8	16.86	3
671		660	1985	6	9.85	3
671		660	1985	4	7.01	3
672	CASS CO RWD3 3F	360	1985	12	6.34	2
672		360	1985	10	2.4	2
673	CASS CO RWD3 3F	360	1985	10	2.41	3
673		360	1985	8	20.68	3
673		360	1985	6	6.02	3
673		360	1985	4	7.01	3
674	OTOE CO RWD III 5F1	561	1978	8	3.185	2
675	OTOE CO RWD III 5F1	561	1978	8	5.318	3
675		561	1978	6	6.25	3
675		561	1978	4	16.629	3
676	CASS CO RWD 4 5F	560	1985	4	4.	3
677	CASS CO RWD4 3F	360	1985	6	2.01	2
678	CASS CO RWD 3F	360	1985	12	3.144	2
679	CASS CO RWD2 5F	360	1980	4	9.5	3
680	DEER CREEK 7B	720	1985	20	4.3	2
681	FLORENCE PREC 7B	720	1985	8	2.75	2
682	DEER CREEK 2B	220	1985	20	4.25	2
682		220	1985	16	1.75	2
683	FLORENCE PREC 2B	220	1985	8	1.	2
684	EAST BELLEVUE 6B	620	1985	20	2.5	1
684		620	1985	16	1.9	1
685	EAST BELLEVUE 3B	320	1985	20	.4	2

686	MUD 5F	560	1975	24	7.121	1
686		560	1985	24	4.03	1
686		560	1985	36	4.367	1
686		560	1990	24	4.5	1
686		560	1990	48	4.3	1
687	MUD 1F	160	1975	36	1.	1
687		160	1980	42	1.515	1
688	MUD 2F	260	1975	24	1.	1
688		260	1980	24	1.25	1
688		260	1980	42	1.515	1
688		260	1985	24	.6	1
688		260	1990	36	6.616	1
689	MUD 3F	360	1975	36	1.	1
689		360	1980	42	1.516	1
689		360	1990	48	.379	1
690	MUD 1A	110	1980	24	5.89	1
690		110	1980	30	3.2	1
690		110	1980	36	7.8	1
690		110	1980	42	5.	1
690		110	1980	96	9.25	1
690		110	1980	120	6.737	1
690		110	1985	24	6.1	1
690		110	1985	36	4.	1
690		110	1985	42	2.	1
690		110	1985	48	1.	1
690		110	1985	54	4.	1
690		110	1985	72	4.	1
690		110	1985	96	9.	1
690		110	1990	24	8.788	1
690		110	1990	36	1.	1
690		110	1990	42	1.	1
690		110	1990	48	3.07	1
690		110	1990	54	5.623	1
690		110	2007	24	10.	1
690		110	2007	36	2.	1
690		110	2007	42	4.2	1
690		110	2007	48	3.	1
691	MUD 1B	120	1980	36	5.848	1
691		120	1980	48	3.	1
691		120	1980	72	9.25	1
691		120	1980	96	6.737	1
691		120	1985	24	1.	1
691		120	1985	54	10.623	1
691		120	1985	60	5.	1
691		120	1995	24	1.	1
691		120	1995	36	2.	1
691		120	1995	42	2.7	1

691		120	2007	24	4.962	1
692	MUD 1C	130	1980	30	2.	1
692		130	1980	36	7.8	1
692		130	1980	42	2.	1
692		130	1980	72	9.25	1
692		130	1980	96	6.737	1
692		130	1985	24	5.6	1
692		130	1985	54	10.623	1
692		130	1985	72	5.	1
692		130	1995	24	1.	1
692		130	1995	36	2.	1
692		130	1995	42	2.7	1
692		130	2007	24	13.023	1
692		130	2007	36	2.07	1
692		130	2007	42	2.	1
693	MUD 1D	140	1980	24	5.89	1
693		140	1980	30	3.2	1
693		140	1980	36	7.8	1
693		140	1980	42	5.	1
693		140	1980	96	9.25	1
693		140	1980	120	6.737	1
693		140	1985	24	9.1	1
693		140	1985	36	4.5	1
693		140	1985	42	5.5	1
693		140	1985	48	2.	1
693		140	1985	54	4.	1
693		140	1985	72	2.	1
693		140	1985	96	9.	1
693		140	1990	24	5.288	1
693		140	1990	42	1.	1
693		140	1990	48	3.07	1
693		140	1990	54	5.623	1
693		140	2007	24	9.5	1
693		140	2007	36	5.	1
693		140	2007	42	2.7	1
693		140	2007	48	.5	1
693		140	2007	72	2.	1
694	MUD 2A	210	1980	24	8.89	1
694		210	1980	30	3.2	1
694		210	1980	36	9.8	1
694		210	1980	42	5.	1
694		210	1980	72	2.	1
694		210	1980	96	10.	1
694		210	1985	24	7.1	1
694		210	1985	36	2.	1
694		210	1985	42	4.	1
694		210	1985	48	6.	1
694		210	1985	54	4.	1
694		210	1985	72	2.	1
694		210	1990	24	8.788	1
694		210	1990	36	1.	1
694		210	1990	42	1.	1
694		210	1990	48	3.07	1
694		210	1990	54	2.992	1
694		210	1990	60	8.623	1
694		210	2007	24	9.	1

694		210	2007	36	2.	1
694		210	2007	42	2.7	1
695	MUD 2B	220	1980	36	5.848	1
695		220	1980	72	8.	1
695		220	1980	96	4.	1
695		220	1985	24	1.	1
695		220	1985	30	3.	1
695		220	1985	42	5.	1
695		220	1985	54	7.992	1
695		220	1985	60	5.623	1
695		220	1995	24	1.	1
695		220	1995	36	2.	1
695		220	1995	42	2.7	1
695		220	1995	54	3.	1
695		220	2007	24	4.962	1
696	MUD 2C	230	1980	30	2.	1
696		230	1980	36	7.8	1
696		230	1980	42	2.	1
696		230	1980	72	2.	1
696		230	1980	96	10.	1
696		230	1985	24	5.6	1
696		230	1985	42	5.	1
696		230	1985	54	7.992	1
696		230	1985	60	5.623	1
696		230	1990	60	3.	1
696		230	1995	24	1.	1
696		230	1995	36	2.	1
696		230	1995	42	2.7	1
696		230	2007	24	13.023	1
696		230	2007	36	2.07	1
696		230	2007	42	2.	1
697	MUD 2D	240	1980	24	8.89	1
697		240	1980	30	3.2	1
697		240	1980	36	9.8	1
697		240	1980	42	5.	1
697		240	1980	72	2.	1
697		240	1980	96	10.	1
697		240	1985	24	10.1	1
697		240	1985	36	2.5	1
697		240	1985	42	7.5	1
697		240	1985	48	7.	1
697		240	1985	54	4.	1
697		240	1990	24	5.288	1
697		240	1990	42	1.	1
697		240	1990	48	3.07	1
697		240	1990	54	2.992	1
697		240	1990	60	8.623	1
697		240	2007	24	9.5	1
697		240	2007	36	2.	1
697		240	2007	42	2.7	1
697		240	2007	48	.5	1
697		240	2007	72	2.	1
698	MUD 3A	310	1980	24	5.89	1
698		310	1980	30	3.2	1
698		310	1980	36	7.8	1
698		310	1980	42	5.	1

698		310	1980	96	9.25	1
698		310	1980	120	6.737	1
698		310	1985	24	6.1	1
698		310	1985	36	4.	1
698		310	1985	42	1.5	1
698		310	1985	48	2.	1
698		310	1985	54	4.	1
698		310	1985	72	2.	1
698		310	1985	96	9.	1
698		310	1990	24	8.788	1
698		310	1990	36	1.	1
698		310	1990	42	1.	1
698		310	1990	48	3.07	1
698		310	1990	54	5.623	1
698		310	2007	24	10.	1
698		310	2007	36	2.	1
698		310	2007	42	2.7	1
698		310	2007	48	2.	1
699	MUD 3B	320	1980	36	5.848	1
699		320	1980	48	3.	1
699		320	1980	72	9.25	1
699		320	1980	96	6.737	1
699		320	1985	24	1.	1
699		320	1985	54	10.623	1
699		320	1985	60	5.	1
699		320	1995	24	1.	1
699		320	1995	36	2.	1
699		320	1995	42	2.7	1
699		320	2007	24	4.962	1
700	MUD 3C	330	1980	30	2.	1
700		330	1980	36	7.8	1
700		330	1980	42	2.	1
700		330	1980	72	9.25	1
700		330	1980	96	6.737	1
700		330	1985	24	5.6	1
700		330	1985	54	10.623	1
700		330	1985	72	5.	1
700		330	1995	24	1.	1
700		330	1995	36	2.	1
700		330	1995	42	2.7	1
700		330	2007	24	13.023	1
700		330	2007	36	2.07	1
700		330	2007	42	2.	1
701	MUD 3D	340	1980	24	5.89	1
701		340	1980	30	3.2	1
701		340	1980	36	7.8	1
701		340	1980	42	5.	1
701		340	1980	96	9.25	1
701		340	1980	120	6.737	1
701		340	1985	24	9.1	1
701		340	1985	36	4.5	1
701		340	1985	42	5.5	1
701		340	1985	48	2.	1
701		340	1985	54	4.	1
701		340	1985	72	2.	1
701		340	1985	96	9.	1

701			340	1990	24	5.288	1
701			340	1990	42	1.	1
701			340	1990	48	3.07	1
701			340	1990	54	5.623	1
701			340	2007	24	9.5	1
701			340	2007	36	5.	1
701			340	2007	42	2.7	1
701			340	2007	48	.5	1
701			340	2007	72	2.	1
702	MUD BENNINGTON 5H		580	1985	12	5.3	1
703	MUD BENNINGTON 5B		520	1985	30	6.7	1
704	MUD BENNINGTON 5C		530	1985	12	5.7	1
705	MUD E-V-W 3A		310	1985	24	3.3	1
706	MUD E-V-W 3B		320	1985	36	8.	1
707	MUD E-V-W 3C		330	1985	24	8.	1
708	MUD E-V-W 3D		340	1985	36	3.3	1
709	MUD E-V-W 2E		250	1985	24	4.	1
710	MUD E-V-W 2B		220	1985	36	4.	1
711	MUD GRETNA 6B		620	1980	36	5.3	1
712	MUD GRETNA 6C		630	1980	24	4.2	1
713	MUD GRETNA 2B		220	1980	36	6.1	1
714	MUD GRETNA 2C		230	1980	24	4.2	1
715	MUD SPRINGFIELD 1E1		151	1985	16	3.5	1
716	MUD SPRINGFIELD 1B1		121	1985	30	4.5	1
717	MUD SPRINGFIELD 8E0		850	1985	16	3.5	1
718	MUD SPRINGFIELD 8B0		820	1985	30	4.5	1
719	SPRINGFIELD 1E2		152	1985	16	2.5	2
720	SPRINGFIELD 1B2		122	1985	30	2.5	2
721	KINGS LAKE 5F		560	1985	6	1.44	2
722	VALLEY 5E		550	1985	12	3.19	2
722			550	1985	16	.5	2
723	VALLEY 5B		520	1985	16	3.69	2
724	ELKHORN 5E		550	1985	12	2.8	2
725	ELKHORN 5B		520	1985	24	2.8	2
726	COUNCIL BLUFFS 5F		560	1975	42	1.042	1
726			560	1975	36	1.004	1
726			560	1985	24	1.288	1
726			560	2007	24	.701	1
727	COUNCIL BLUFFS 3F		360	1985	30	1.042	1
728	TO NEHAWKA	2F2	262	1985	4	2.35	2
729	TO UNION	2F2	262	1985	4	1.78	2
730	TO WPNG WATER	5F2	562	1978	8	1.5	2
731	OTOE CO RWD3	5F2	562	1978	10	3.185	2
732	OTOE CO RWD3	5F2	562	1978	10	2.815	3
732			562	1978	8	2.503	3
732			562	1978	6	6.25	3
732			562	1978	4	16.629	3
733	BLAIR RIVER XING 3E		350	1975	24	.3	1
734	BLAIR RIVER XING 3B		320	1975	30	.3	1
735	BELLEVUE R XING 3F		360	1975	36	.3	1

ESPENDITURES REPORT

Appendix 1

TREATMENT FACILITIES

		1975	1984	1985	1995	2020
001	BLAIR 1E					
	CAPITAL EXPENDITURES ($1000)	2837.250	0.000	2837.250	0.000	0.000
	SLUDGE HANDLING COST (1000)	952.275	0.000	952.275	0.000	0.000
	TOTAL CAPITAL COSTS (1000)	3789.525	0.000	3789.525	0.000	0.000
	ANNUAL O&M ($1000/YR)	59.382	71.018	136.353	150.403	157.769
	SLUDGE HANDLING (1000/YR)	23.962	29.078	57.878	65.772	70.012
	CHEMICAL (1000/YR)	16.160	21.079	48.762	56.351	60.426
	TOTAL ANNUAL O&M (1000/YR)	99.505	121.176	242.993	272.526	288.206

		1975	1984	1985	1995	2020
002	BLAIR 1B					
	CAPITAL EXPENDITURES ($1000)	2837.250	0.000	5982.000	2949.562	0.000
	SLUDGE HANDLING COST (1000)	952.275	0.000	1335.175	965.950	0.000
	TOTAL CAPITAL COSTS (1000)	3789.525	0.000	7317.175	3915.512	0.000
	ANNUAL O&M ($1000/YR)	59.382	104.255	189.630	223.856	257.867
	SLUDGE HANDLING (1000/YR)	23.962	44.428	90.332	125.564	167.228
	CHEMICAL (1000/YR)	16.160	35.834	79.959	113.825	153.875
	TOTAL ANNUAL O&M (1000/YR)	99.505	184.517	359.920	463.245	578.970

		1975	1984	1985	1995	2020
003	BLAIR 2E					
	CAPITAL EXPENDITURES ($1000)	2837.250	0.000	2275.637	752.945	0.000
	SLUDGE HANDLING COST (1000)	952.275	0.000	883.900	6.250	0.000
	TOTAL CAPITAL COSTS (1000)	3789.525	0.000	3159.537	759.195	0.000
	ANNUAL O&M ($1000/YR)	59.382	71.018	130.507	141.624	147.169
	SLUDGE HANDLING (1000/YR)	23.962	29.078	55.539	61.240	64.310
	CHEMICAL (1000/YR)	16.160	21.079	46.514	51.994	54.945
	TOTAL ANNUAL O&M (1000/YR)	99.505	121.176	232.560	254.859	266.424

		1975	1984	1985	1995	2020
004	BLAIR 2B					
	CAPITAL EXPENDITURES ($1000)	2837.250	0.000	3960.375	2275.687	0.000
	SLUDGE HANDLING COST (1000)	952.275	0.000	1089.025	883.900	0.000
	TOTAL CAPITAL COSTS (1000)	3789.525	0.000	5049.400	3159.587	0.000
	ANNUAL O&M ($1000/YR)	59.382	104.255	161.005	192.672	218.670
	SLUDGE HANDLING (1000/YR)	23.962	44.428	71.035	92.233	112.261
	CHEMICAL (1000/YR)	16.160	35.134	61.409	81.786	101.037
	TOTAL ANNUAL O&M (1000/YR)	99.505	184.517	293.450	366.690	431.968

		1975	1984	1985	1995	2020
005	BLAIR 3E					
	CAPITAL EXPENDITURES ($1000)	3286.500	0.000	4858.875	1168.340	0.000
	SLUDGE HANDLING COST (1000)	1006.975	0.000	1198.425	12.500	0.000
	TOTAL CAPITAL COSTS (1000)	4293.475	0.000	6057.300	1180.840	0.000
	ANNUAL O&M ($1000/YR)	76.129	85.946	203.576	217.998	225.855
	SLUDGE HANDLING (1000/YR)	30.248	36.242	100.565	112.992	119.716
	CHEMICAL (1000/YR)	22.203	17.964	89.795	101.740	108.204
	TOTAL ANNUAL O&M (1000/YR)	128.480	153.152	393.937	432.729	453.775

		1975	1984	1985	1995	2007	2020
006	BLAIR 3B						
	CAPITAL EXPENDITURES ($1000)	3286.500	0.000	9126.750	2163.375	2163.375	0.000
	SLUDGE HANDLING COST (1000)	1006.975	0.000	1718.075	870.225	870.225	0.000
	TOTAL CAPITAL COSTS (1000)	4293.475	0.000	10844.825	3033.600	3033.600	0.000
	ANNUAL O&M ($1000/YR)	76.029	112.567	215.746	274.265	0.000	326.821
	SLUDGE HANDLING (1000/YR)	30.248	47.645	152.136	166.011	0.000	178.473
	CHEMICAL (1000/YR)	22.203	38.925	137.293	174.532	0.000	207.977
	TOTAL ANNUAL O&M (1000/YR)	128.480	199.137	505.175	614.808	0.000	713.271

		1985	2020
007	MODALE 1F		
	CAPITAL EXPENDITURES ($1000)	2276.140	0.000
	SLUDGE HANDLING COST (1000)	10.250	0.000

TOTAL CAPITAL COSTS (1000)	2286.390	0.000
ANNUAL O&M ($1000/YR)	21.018	21.018
SLUDGE HANDLING (1000/YR)	1.408	1.408
CHEMICAL (1000/YR)	1.855	1.855
TOTAL ANNUAL O&M (1000/YR)	24.281	24.281

008 PISGAH 1F	1985	2020
CAPITAL EXPENDITURES ($1000)	1724.377	0.000
SLUDGE HANDLING COST (1000)	13.125	0.000
TOTAL CAPITAL COSTS (1000)	1737.502	0.000
ANNUAL O&M ($1000/YR)	27.666	27.871
SLUDGE HANDLING (1000/YR)	2.024	2.068
CHEMICAL (1000/YR)	10.840	11.142
TOTAL ANNUAL O&M (1000/YR)	40.530	41.080

009 MAGNOLIA 1F	1985	2020
CAPITAL EXPENDITURES ($1000)	1964.389	0.000
SLUDGE HANDLING COST (1000)	9.375	0.000
TOTAL CAPITAL COSTS (1000)	1973.764	0.000
ANNUAL O&M ($1000/YR)	20.992	21.204
SLUDGE HANDLING (1000/YR)	1.452	1.496
CHEMICAL (1000/YR)	6.926	7.227
TOTAL ANNUAL O&M (1000/YR)	29.370	29.927

010 DUNLAP 1F	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	2638.750	0.000	0.000
SLUDGE HANDLING COST (1000)	817.875	0.000	0.000
TOTAL CAPITAL COSTS (1000)	3456.625	0.000	0.000
ANNUAL O&M ($1000/YR)	38.350	40.526	41.248
SLUDGE HANDLING (1000/YR)	14.714	15.475	15.729
CHEMICAL (1000/YR)	21.380	23.187	23.789
TOTAL ANNUAL O&M (1000/YR)	74.444	79.187	80.766

011 MISSOURI VALLEY 1E	1975	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	1614.584	1614.584	0.000	0.000
SLUDGE HANDLING COST (1000)	16.250	16.250	0.000	0.000
TOTAL CAPITAL COSTS (1000)	1630.834	1630.834	0.000	0.000
ANNUAL O&M ($1000/YR)	29.945	45.127	59.432	61.486
SLUDGE HANDLING (1000/YR)	2.332	16.490	21.690	22.451
CHEMICAL (1000/YR)	12.948	25.595	37.942	39.748
TOTAL ANNUAL O&M (1000/YR)	45.226	87.212	119.064	123.686

012 MISSOURI VALLEY 1B	1975	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	1614.584	2825.500	709.195	0.000
SLUDGE HANDLING COST (1000)	16.250	860.075	6.250	0.000
TOTAL CAPITAL COSTS (1000)	1630.834	3685.575	715.445	0.000
ANNUAL O&M ($1000/YR)	29.945	68.150	99.614	103.558
SLUDGE HANDLING (1000/YR)	2.332	23.338	35.514	37.163
CHEMICAL (1000/YR)	12.948	41.856	70.764	74.679
TOTAL ANNUAL O&M (1000/YR)	45.226	133.345	205.893	215.400

013 MODAMIN 2E	1975	1984	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	1168.340	0.000	3286.500	752.945	0.000
SLUDGE HANDLING COST (1000)	12.500	0.000	1006.975	6.250	0.000
TOTAL CAPITAL COSTS (1000)	1180.840	0.000	4293.475	759.195	0.000
ANNUAL O&M ($1000/YR)	31.707	32.683	118.509	127.370	130.465
SLUDGE HANDLING (1000/YR)	2.948	3.168	49.837	54.369	55.685
CHEMICAL (1000/YR)	8.010	8.713	41.033	45.390	46.554

TOTAL ANNUAL O&M (1000/YR)	42.665	44.564	209.379	227.729	232.804

014 MODAMIN 2B	1975	1984	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	1168.340	0.000	4185.000	752.945	0.000
SLUDGE HANDLING COST (1000)	12.500	0.000	1116.375	6.250	0.000
TOTAL CAPITAL COSTS (1000)	1180.840	0.000	5301.375	759.195	0.000
ANNUAL O&M ($1000/YR)	31.707	42.330	136.353	158.584	162.293
SLUDGE HANDLING (1000/YR)	2.948	5.456	57.878	70.304	72.497
CHEMICAL (1000/YR)	8.010	16.020	48.762	60.707	62.815
TOTAL ANNUAL O&M (1000/YR)	42.665	63.806	242.993	289.595	297.605

015 HONEY CREEK 1F	1985	2020
CAPITAL EXPENDITURES ($1000)	2276.144	0.000
SLUDGE HANDLING COST (1000)	20.625	0.000
TOTAL CAPITAL COSTS (1000)	2296.769	0.000
ANNUAL O&M ($1000/YR)	36.062	36.062
SLUDGE HANDLING (1000/YR)	3.432	3.432
CHEMICAL (1000/YR)	20.476	20.476
TOTAL ANNUAL O&M (1000/YR)	59.970	59.970

016 NEOLA 1F	1985	2020
CAPITAL EXPENDITURES ($1000)	3293.300	0.000
SLUDGE HANDLING COST (1000)	843.195	0.000
TOTAL CAPITAL COSTS (1000)	4136.495	0.000
ANNUAL O&M ($1000/YR)	54.949	54.949
SLUDGE HANDLING (1000/YR)	20.041	20.041
CHEMICAL (1000/YR)	34.027	34.027
TOTAL ANNUAL O&M (1000/YR)	109.016	109.016

017 AVOCA 1F	1985	2020
CAPITAL EXPENDITURES ($1000)	2768.300	0.000
SLUDGE HANDLING COST (1000)	843.195	0.000
TOTAL CAPITAL COSTS (1000)	3611.495	0.000
ANNUAL O&M ($1000/YR)	54.949	54.949
SLUDGE HANDLING (1000/YR)	20.041	20.041
CHEMICAL (1000/YR)	34.027	34.027
TOTAL ANNUAL O&M (1000/YR)	109.016	109.016

018 WALNUT 1F	1985	2020
CAPITAL EXPENDITURES ($1000)	2309.890	0.000
SLUDGE HANDLING COST (1000)	21.250	0.000
TOTAL CAPITAL COSTS (1000)	2331.140	0.000
ANNUAL O&M ($1000/YR)	36.998	36.998
SLUDGE HANDLING (1000/YR)	3.608	3.608
CHEMICAL (1000/YR)	21.681	21.681
TOTAL ANNUAL O&M (1000/YR)	62.287	62.287

019 POTT RWD6 1F	1985	2020
CAPITAL EXPENDITURES ($1000)	2973.503	0.000
SLUDGE HANDLING COST (1000)	23.750	0.000
TOTAL CAPITAL COSTS (1000)	2997.253	0.000
ANNUAL O&M ($1000/YR)	38.819	38.819
SLUDGE HANDLING (1000/YR)	3.872	3.872
CHEMICAL (1000/YR)	23.488	23.488
TOTAL ANNUAL O&M (1000/YR)	66.178	66.178

020 OAKLAND 1F	1985	2020

CAPITAL EXPENDITURES ($1000)	2615.102	0.000
SLUDGE HANDLING COST (1000)	18.750	0.000
TOTAL CAPITAL COSTS (1000)	2633.852	0.000
ANNUAL O&M ($1000/YR)	31.833	31.833
SLUDGE HANDLING (1000/YR)	2.596	2.596
CHEMICAL (1000/YR)	14.755	14.755
TOTAL ANNUAL O&M (1000/YR)	49.184	49.184
021 CARSON 1F	1985	2020
CAPITAL EXPENDITURES ($1000)	1577.422	0.000
SLUDGE HANDLING COST (1000)	8.750	0.000
TOTAL CAPITAL COSTS (1000)	1586.172	0.000
ANNUAL O&M ($1000/YR)	24.811	24.811
SLUDGE HANDLING (1000/YR)	1.672	1.672
CHEMICAL (1000/YR)	8.431	8.431
TOTAL ANNUAL O&M (1000/YR)	34.914	34.914
022 POTT RWD 7 1F	1985	2020
CAPITAL EXPENDITURES ($1000)	1577.422	0.000
SLUDGE HANDLING COST (1000)	8.750	0.000
TOTAL CAPITAL COSTS (1000)	1586.172	0.000
ANNUAL O&M ($1000/YR)	21.033	21.033
SLUDGE HANDLING (1000/YR)	1.496	1.496
CHEMICAL (1000/YR)	7.227	7.227
TOTAL ANNUAL O&M (1000/YR)	29.756	29.756
023 HENDERSON 1F	1985	2020
CAPITAL EXPENDITURES ($1000)	2130.840	0.000
SLUDGE HANDLING COST (1000)	12.500	0.000
TOTAL CAPITAL COSTS (1000)	2143.340	0.000
ANNUAL O&M ($1000/YR)	28.109	28.109
SLUDGE HANDLING (1000/YR)	2.156	2.156
CHEMICAL (1000/YR)	11.744	11.744
TOTAL ANNUAL O&M (1000/YR)	42.009	42.009
024 MILLS RWD 3 1F	1985	2020
CAPITAL EXPENDITURES ($1000)	3549.925	0.000
SLUDGE HANDLING COST (1000)	822.095	0.000
TOTAL CAPITAL COSTS (1000)	4372.020	0.000
ANNUAL O&M ($1000/YR)	44.768	45.482
SLUDGE HANDLING (1000/YR)	16.870	17.124
CHEMICAL (1000/YR)	26.499	27.101
TOTAL ANNUAL O&M (1000/YR)	88.137	89.707

025 PACIFIC JUNCTION 1E1	1965	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	1154.907	2475.500	1938.750	1168.340	1168.340	0.000
SLUDGE HANDLING COST (1000)	9.000	860.075	817.875	12.500	12.500	0.000
TOTAL CAPITAL COSTS (1000)	1163.907	3335.575	2756.625	1180.840	1180.840	0.000
ANNUAL O&M ($1000/YR)	0.000	71.322	104.633	135.397	0.000	167.626
SLUDGE HANDLING (1000/YR)	0.000	25.114	36.909	49.973	0.000	65.319
CHEMICAL (1000/YR)	0.000	46.072	74.077	105.093	0.000	141.529
TOTAL ANNUAL O&M (1000/YR)	0.000	142.508	215.619	290.462	0.000	374.474

026 PACIFIC JUNCTION 1E2	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	2724.937	1938.750	1168.340	1168.340	0.000
SLUDGE HANDLING COST (1000)	938.600	842.875	12.500	12.500	0.000
TOTAL CAPITAL COSTS (1000)	3663.537	2781.625	1180.840	1180.840	0.000
ANNUAL O&M ($1000/YR)	73.037	104.688	135.432	0.000	167.638
SLUDGE HANDLING (1000/YR)	30.248	43.113	58.170	0.000	75.859
CHEMICAL (1000/YR)	22.203	34.569	49.043	0.000	66.047
TOTAL ANNUAL O&M (1000/YR)	125.488	182.369	242.645	0.000	309.544

027 PACIFIC JUNCTION 1B1	1965	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	1154.907	2475.500	2475.500	1001.889	1001.889	0.000
SLUDGE HANDLING COST (1000)	9.000	860.075	860.075	9.375	9.375	0.000
TOTAL CAPITAL COSTS (1000)	1163.907	3335.575	3335.575	1011.264	1011.264	0.000
ANNUAL O&M ($1000/YR)	0.000	71.322	106.458	146.842	0.000	173.653
SLUDGE HANDLING (1000/YR)	0.000	25.114	36.909	55.046	0.000	68.363
CHEMICAL (1000/YR)	0.000	46.072	74.077	117.138	0.000	148.756
TOTAL ANNUAL O&M (1000/YR)	0.000	142.508	217.444	319.025	0.000	390.772

028 PACIFIC JUNCTION 1B2	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	2724.937	2388.000	980.014	980.014	0.000
SLUDGE HANDLING COST (1000)	938.600	897.575	9.375	9.375	0.000
TOTAL CAPITAL COSTS (1000)	3663.537	3285.575	989.389	989.389	0.000
ANNUAL O&M ($1000/YR)	73.037	106.513	146.869	0.000	173.660
SLUDGE HANDLING (1000/YR)	30.248	43.113	64.018	0.000	79.368
CHEMICAL (1000/YR)	22.203	34.569	54.664	0.000	69.419
TOTAL ANNUAL O&M (1000/YR)	125.488	184.195	265.551	0.000	322.447

029 PACIFIC JUNCTION 2E	1975	1984	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	2724.937	0.000	2724.937	1521.352	1343.336	0.000
SLUDGE HANDLING COST (1000)	938.600	0.000	938.600	18.750	15.625	0.000
TOTAL CAPITAL COSTS (1000)	3663.537	0.000	3663.537	1540.102	1358.961	0.000
ANNUAL O&M ($1000/YR)	73.037	101.037	149.732	172.642	0.000	199.961
SLUDGE HANDLING (1000/YR)	30.248	43.113	65.626	78.637	0.000	96.472
CHEMICAL (1000/YR)	22.203	34.569	56.210	68.717	0.000	85.861
TOTAL ANNUAL O&M (1000/YR)	125.488	178.719	271.568	319.995	0.000	382.294

030 PACIFIC JUNCTION 2B	1975	1984	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	2724.937	0.000	2949.562	1168.340	1168.340	0.000
SLUDGE HANDLING COST (1000)	938.600	0.000	965.950	12.500	12.500	0.000
TOTAL CAPITAL COSTS (1000)	3663.537	0.000	3915.512	1180.840	1180.840	0.000
ANNUAL O&M ($1000/YR)	73.037	101.037	150.147	171.929	0.000	181.119
SLUDGE HANDLING (1000/YR)	30.248	43.113	65.626	78.198	0.000	83.900
CHEMICAL (1000/YR)	22.203	34.569	56.210	68.295	0.000	73.776
TOTAL ANNUAL O&M (1000/YR)	125.488	178.719	271.983	318.423	0.000	338.795

031 PLATTSMOUTH 1E1	1973	1975	1995	2020
CAPITAL EXPENDITURES ($1000)	2388.000	0.000	885.425	0.000
SLUDGE HANDLING COST (1000)	860.075	0.000	7.500	0.000

TOTAL CAPITAL COSTS (1000)	3248.075	0.000	892.925	0.000
ANNUAL O&M ($1000/YR)	0.000	48.032	61.359	63.042
SLUDGE HANDLING (1000/YR)	0.000	17.124	21.436	22.070
CHEMICAL (1000/YR)	0.000	7.588	10.455	10.877
TOTAL ANNUAL O&M (1000/YR)	0.000	72.744	93.250	95.989

032 PLATTSMOUTH 1B1	1973	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	2388.000	0.000	2746.812	1001.889	1001.889	0.000
SLUDGE HANDLING COST (1000)	860.075	0.000	891.725	9.375	9.375	0.000
TOTAL CAPITAL COSTS (1000)	3248.075	0.000	3638.537	1011.264	1011.264	0.000
ANNUAL O&M ($1000/YR)	0.000	48.032	0.000	137.636	0.000	144.974
SLUDGE HANDLING (1000/YR)	0.000	17.124	0.000	50.607	0.000	53.778
CHEMICAL (1000/YR)	0.000	7.588	0.000	29.848	0.000	31.955
TOTAL ANNUAL O&M (1000/YR)	0.000	72.744	0.000	218.090	0.000	230.707

033 PLATTSMOUTH 6E2	1975	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	2163.375	802.983	802.983	0.000
SLUDGE HANDLING COST (1000)	870.225	6.875	6.875	0.000
TOTAL CAPITAL COSTS (1000)	3033.600	809.858	809.858	0.000
ANNUAL O&M ($1000/YR)	46.615	59.922	0.000	63.042
SLUDGE HANDLING (1000/YR)	20.307	25.278	0.000	26.009
CHEMICAL (1000/YR)	12.647	17.425	0.000	18.128
TOTAL ANNUAL O&M (1000/YR)	79.569	102.624	0.000	107.178

034 PLATTSMOUTH 6B2	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	2612.625	2612.625	895.563	850.425	0.000
SLUDGE HANDLING COST (1000)	924.925	924.925	8.125	7.500	0.000
TOTAL CAPITAL COSTS (1000)	3537.550	3537.550	903.688	857.925	0.000
ANNUAL O&M ($1000/YR)	49.449	0.000	137.805	0.000	144.974
SLUDGE HANDLING (1000/YR)	20.307	0.000	58.901	0.000	62.556
CHEMICAL (1000/YR)	12.647	0.000	49.746	0.000	53.259
TOTAL ANNUAL O&M (1000/YR)	82.403	0.000	246.452	0.000	260.789

035 LOUISVILLE 6F	1985	2020
CAPITAL EXPENDITURES ($1000)	2099.925	0.000
SLUDGE HANDLING COST (1000)	822.095	0.000
TOTAL CAPITAL COSTS (1000)	2922.020	0.000
ANNUAL O&M ($1000/YR)	39.371	41.539
SLUDGE HANDLING (1000/YR)	14.968	15.729
CHEMICAL (1000/YR)	6.155	6.661
TOTAL ANNUAL O&M (1000/YR)	60.494	63.928

036 GREENWOOD 6F	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	783.853	783.853	0.000
SLUDGE HANDLING COST (1000)	5.000	5.000	0.000
TOTAL CAPITAL COSTS (1000)	788.853	788.853	0.000
ANNUAL O&M ($1000/YR)	16.753	20.092	20.737
SLUDGE HANDLING (1000/YR)	.836	1.232	1.364
CHEMICAL (1000/YR)	2.710	5.420	6.324
TOTAL ANNUAL O&M (1000/YR)	20.299	26.745	28.424

037 NEHAWKA 5F	1985	2020
CAPITAL EXPENDITURES ($1000)	625.148	0.000
SLUDGE HANDLING COST (1000)	2.500	0.000
TOTAL CAPITAL COSTS (1000)	627.648	0.000
ANNUAL O&M ($1000/YR)	15.622	16.514
SLUDGE HANDLING (1000/YR)	.748	.924
CHEMICAL (1000/YR)	2.108	3.312

TOTAL ANNUAL O&M (1000/YR)	18.478	20.751
038 UNION 5F	1985	2020
CAPITAL EXPENDITURES ($1000)	505.488	0.000
SLUDGE HANDLING COST (1000)	1.500	0.000
TOTAL CAPITAL COSTS (1000)	506.988	0.000
ANNUAL O&M ($1000/YR)	14.437	14.437
SLUDGE HANDLING (1000/YR)	.572	.572
CHEMICAL (1000/YR)	.903	.903
TOTAL ANNUAL O&M (1000/YR)	15.913	15.913
039 WEEPING WATER 5F	1985	2020
CAPITAL EXPENDITURES ($1000)	1789.389	0.000
SLUDGE HANDLING COST (1000)	9.375	0.000
TOTAL CAPITAL COSTS (1000)	1798.764	0.000
ANNUAL O&M ($1000/YR)	20.566	21.416
SLUDGE HANDLING (1000/YR)	1.364	1.540
CHEMICAL (1000/YR)	6.324	7.528
TOTAL ANNUAL O&M (1000/YR)	28.253	30.484

040 SPRINGFIELD 1E2	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	1590.102	0.000	909.195	0.000
SLUDGE HANDLING COST (1000)	18.750	0.000	6.250	0.000
TOTAL CAPITAL COSTS (1000)	1608.852	0.000	915.445	0.000
ANNUAL O&M ($1000/YR)	27.961	32.231	39.077	46.981
SLUDGE HANDLING (1000/YR)	1.760	2.684	14.968	17.758
CHEMICAL (1000/YR)	2.529	4.300	6.155	8.010
TOTAL ANNUAL O&M (1000/YR)	32.251	39.215	60.200	72.749

041 SPRINGFIELD 1B2	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	3991.625	1180.840	1180.840	0.000
SLUDGE HANDLING COST (1000)	1007.775	12.500	12.500	0.000
TOTAL CAPITAL COSTS (1000)	4999.400	1193.340	1193.340	0.000
ANNUAL O&M ($1000/YR)	37.606	131.194	0.000	161.554
SLUDGE HANDLING (1000/YR)	9.514	47.563	0.000	62.022
CHEMICAL (1000/YR)	2.529	27.824	0.000	37.436
TOTAL ANNUAL O&M (1000/YR)	49.650	206.581	0.000	261.011

042 SPRINGFIELD 3E	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	3168.125	1490.102	1180.840	0.000
SLUDGE HANDLING COST (1000)	923.375	18.750	12.500	0.000
TOTAL CAPITAL COSTS (1000)	4091.500	1508.852	1193.340	0.000
ANNUAL O&M ($1000/YR)	91.632	105.733	0.000	123.106
SLUDGE HANDLING (1000/YR)	32.470	37.163	0.000	44.138
CHEMICAL (1000/YR)	17.790	20.910	0.000	25.547
TOTAL ANNUAL O&M (1000/YR)	141.892	163.806	0.000	192.792

043 SPRINGFIELD 3B	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	5657.750	1963.750	1490.102	0.000
SLUDGE HANDLING COST (1000)	1155.475	817.875	18.750	0.000
TOTAL CAPITAL COSTS (1000)	6813.225	2781.625	1508.852	0.000
ANNUAL O&M ($1000/YR)	139.451	181.589	0.000	206.028
SLUDGE HANDLING (1000/YR)	50.099	72.548	0.000	88.402
CHEMICAL (1000/YR)	29.510	44.434	0.000	54.973
TOTAL ANNUAL O&M (1000/YR)	219.061	298.571	0.000	349.404

044 VALLEY 1E	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	1756.549	760.634	608.853	0.000
SLUDGE HANDLING COST (1000)	21.875	5.625	5.000	0.000
TOTAL CAPITAL COSTS (1000)	1778.424	766.259	613.853	0.000
ANNUAL O&M ($1000/YR)	41.695	44.338	0.000	60.118
SLUDGE HANDLING (1000/YR)	3.300	16.616	0.000	21.943
CHEMICAL (1000/YR)	5.480	7.251	0.000	10.792
TOTAL ANNUAL O&M (1000/YR)	50.476	68.206	0.000	92.854

045 VALLEY 1B	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	3457.525	1655.340	1490.102	0.000
SLUDGE HANDLING COST (1000)	957.135	20.000	18.750	0.000
TOTAL CAPITAL COSTS (1000)	4414.660	1675.340	1508.852	0.000
ANNUAL O&M ($1000/YR)	76.430	113.383	0.000	154.268
SLUDGE HANDLING (1000/YR)	25.621	39.826	0.000	58.343
CHEMICAL (1000/YR)	13.237	22.681	0.000	34.991
TOTAL ANNUAL O&M (1000/YR)	115.288	175.890	0.000	247.602

046 COUNCIL BLUFFS 1A	1952	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	8677.500	0.000	2612.625	3286.500	3061.875	0.000
SLUDGE HANDLING COST (1000)	1663.375	0.000	914.925	1006.975	979.625	0.000

TOTAL CAPITAL COSTS (1000)	10340.875	0.000	3537.550	4293.475	4041.500	0.000
ANNUAL O&M ($1000/YR)	0.000	232.199	234.737	272.056	0.000	374.740
SLUDGE HANDLING (1000/YR)	0.000	129.803	156.639	165.488	0.000	189.835
CHEMICAL (1000/YR)	0.000	117.900	149.378	173.127	0.000	238.471
TOTAL ANNUAL O&M (1000/YR)	0.000	479.902	540.754	610.671	0.000	803.046

047 COUNCIL BLUFFS 1B	1952	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	8677.500	0.000	3735.750	2163.375	2163.375	0.000
SLUDGE HANDLING COST (1000)	1663.375	0.000	1061.675	870.225	870.225	0.000
TOTAL CAPITAL COSTS (1000)	10340.875	0.000	4797.425	3033.600	3033.600	0.000
ANNUAL O&M ($1000/YR)	0.000	232.199	234.737	298.776	0.000	357.736
SLUDGE HANDLING (1000/YR)	0.000	129.803	156.639	171.823	0.000	185.803
CHEMICAL (1000/YR)	0.000	117.900	149.378	190.130	0.000	227.650
TOTAL ANNUAL O&M (1000/YR)	0.000	479.902	540.754	660.730	0.000	771.190

048 COUNCIL BLUFFS 1C	1952	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	8677.500	0.000	2388.000	2837.250	2612.625	0.000
SLUDGE HANDLING COST (1000)	1663.375	0.000	897.575	952.275	924.925	0.000
TOTAL CAPITAL COSTS (1000)	10340.875	0.000	3285.575	3789.525	3537.550	0.000
ANNUAL O&M ($1000/YR)	0.000	232.199	234.737	271.173	0.000	359.593
SLUDGE HANDLING (1000/YR)	0.000	129.803	156.639	165.278	0.000	186.222
CHEMICAL (1000/YR)	0.000	117.900	149.378	172.565	0.000	228.775
TOTAL ANNUAL O&M (1000/YR)	0.000	479.902	540.754	609.016	0.000	774.500

049 COUNCIL BLUFFS 1D	1952	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	8677.500	0.000	2612.625	3511.125	3286.500	0.000
SLUDGE HANDLING COST (1000)	1663.375	0.000	924.925	1034.325	1006.975	0.000
TOTAL CAPITAL COSTS (1000)	10340.875	0.000	3537.550	4545.450	4293.475	0.000
ANNUAL O&M ($1000/YR)	0.000	232.199	234.737	272.056	0.000	388.210
SLUDGE HANDLING (1000/YR)	0.000	129.803	156.639	165.488	0.000	193.029
CHEMICAL (1000/YR)	0.000	117.900	149.378	173.127	0.000	247.043
TOTAL ANNUAL O&M (1000/YR)	0.000	479.902	540.754	610.671	0.000	828.282

050 COUNCIL BLUFFS 2A	1952	1975	1984	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	8677.500	0.000	0.000	6206.625	3286.500	3061.875	0.000
SLUDGE HANDLING COST (1000)	1663.375	0.000	0.000	1362.525	1006.975	979.625	0.000
TOTAL CAPITAL COSTS (1000)	10340.875	0.000	0.000	7569.150	4293.475	4041.500	0.000
ANNUAL O&M ($1000/YR)	0.000	232.199	262.206	333.004	378.273	0.000	482.061
SLUDGE HANDLING (1000/YR)	0.000	129.803	162.550	179.939	190.673	0.000	215.282
CHEMICAL (1000/YR)	0.000	117.900	149.378	211.912	240.719	0.000	306.766
TOTAL ANNUAL O&M (1000/YR)	0.000	479.902	574.134	724.855	809.665	0.000	1004.109

051 COUNCIL BLUFFS 2B	1952	1975	1984	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	8677.500	0.000	0.000	7779.000	2388.000	2163.375	0.000
SLUDGE HANDLING COST (1000)	1663.375	0.000	0.000	1553.975	897.575	870.225	0.000
TOTAL CAPITAL COSTS (1000)	10340.875	0.000	0.000	9332.975	3285.575	3033.600	0.000
ANNUAL O&M ($1000/YR)	0.000	232.199	262.206	333.004	420.230	0.000	483.165
SLUDGE HANDLING (1000/YR)	0.000	129.803	162.550	179.939	200.621	0.000	215.544
CHEMICAL (1000/YR)	0.000	117.900	149.378	211.912	267.419	0.000	307.469
TOTAL ANNUAL O&M (1000/YR)	0.000	479.902	574.134	724.855	888.270	0.000	1006.177

052 COUNCIL BLUFFS 2C	1952	1975	1984	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	8677.500	0.000	0.000	6655.875	2837.250	2612.625	0.000
SLUDGE HANDLING COST (1000)	1663.375	0.000	0.000	1417.225	952.275	924.925	0.000
TOTAL CAPITAL COSTS (1000)	10340.875	0.000	0.000	8073.100	3789.525	3537.550	0.000
ANNUAL O&M ($1000/YR)	0.000	232.199	262.206	333.004	392.627	0.000	484.932
SLUDGE HANDLING (1000/YR)	0.000	129.803	162.550	179.939	194.076	0.000	215.963
CHEMICAL (1000/YR)	0.000	117.900	149.378	211.912	249.853	0.000	308.593

TOTAL ANNUAL O&M (1000/YR)	0.000	479.902	574.134	724.855	836.556	0.000	1009.487	
053 COUNCIL BLUFFS 2D	1952	1975	1984	1985	1995	2007	2020	
CAPITAL EXPENDITURES ($1000)	8677.500	0.000	0.000	6880.500	3511.125	3286.500	0.000	
SLUDGE HANDLING COST (1000)	1663.375	0.000	0.000	1444.575	1034.325	1006.975	0.000	
TOTAL CAPITAL COSTS (1000)	10340.875	0.000	0.000	8325.075	4545.450	4293.475	0.000	
ANNUAL O&M ($1000/YR)	0.000	232.199	262.206	333.004	393.510	0.000	513.639	
SLUDGE HANDLING (1000/YR)	0.000	129.803	162.550	179.939	194.286	0.000	222.769	
CHEMICAL (1000/YR)	0.000	117.900	149.378	211.912	250.416	0.000	326.861	
TOTAL ANNUAL O&M (1000/YR)	0.000	479.902	574.134	724.855	838.211	0.000	1063.269	
054 COUNCIL BLUFFS 3A	1952	1975	1984	1985	1995	2007	2020	
CAPITAL EXPENDITURES ($1000)	8677.500	0.000	0.000	5982.000	3061.875	2837.250	0.000	
SLUDGE HANDLING COST (1000)	1663.375	0.000	0.000	1335.175	979.625	952.275	0.000	
TOTAL CAPITAL COSTS (1000)	10340.875	0.000	0.000	7317.175	4041.500	3789.525	0.000	
ANNUAL O&M ($1000/YR)	0.000	232.199	262.206	330.354	372.973	0.000	469.916	
SLUDGE HANDLING (1000/YR)	0.000	129.803	162.550	179.311	189.416	0.000	212.402	
CHEMICAL (1000/YR)	0.000	117.900	149.378	210.225	237.347	0.000	299.037	
TOTAL ANNUAL O&M (1000/YR)	0.000	479.902	574.134	719.890	799.736	0.000	981.355	
055 COUNCIL BLUFFS 3B	1952	1975	1984	1985	1995	2007	2020	
CAPITAL EXPENDITURES ($1000)	8677.500	0.000	0.000	6655.875	2163.375	1938.750	0.000	
SLUDGE HANDLING COST (1000)	1663.375	0.000	0.000	1417.225	870.225	842.875	0.000	
TOTAL CAPITAL COSTS (1000)	10340.875	0.000	0.000	8073.100	3033.600	2781.625	0.000	
ANNUAL O&M ($1000/YR)	0.000	232.199	262.206	330.354	389.094	0.000	444.079	
SLUDGE HANDLING (1000/YR)	0.000	129.803	162.550	179.311	193.238	0.000	206.276	
CHEMICAL (1000/YR)	0.000	117.900	149.378	210.225	247.605	0.000	282.596	
TOTAL ANNUAL O&M (1000/YR)	0.000	479.902	574.134	719.890	829.937	0.000	932.951	
056 COUNCIL BLUFFS 3C	1952	1975	1984	1985	1995	2007	2020	
CAPITAL EXPENDITURES ($1000)	8677.500	0.000	0.000	6431.250	2837.250	2612.625	0.000	
SLUDGE HANDLING COST (1000)	1663.375	0.000	0.000	1389.875	952.275	924.925	0.000	
TOTAL CAPITAL COSTS (1000)	10340.875	0.000	0.000	7821.125	3789.525	3537.550	0.000	
ANNUAL O&M ($1000/YR)	0.000	232.199	262.206	330.354	387.327	0.000	478.749	
SLUDGE HANDLING (1000/YR)	0.000	129.803	162.550	179.311	192.819	0.000	214.496	
CHEMICAL (1000/YR)	0.000	117.900	149.378	210.225	246.481	0.000	304.658	
TOTAL ANNUAL O&M (1000/YR)	0.000	479.902	574.134	719.890	826.627	0.000	997.903	
057 COUNCIL BLUFFS 3D	1952	1975	1984	1985	1995	2007	2020	
CAPITAL EXPENDITURES ($1000)	8677.500	0.000	0.000	6431.250	3286.500	3061.875	0.000	
SLUDGE HANDLING COST (1000)	1663.375	0.000	0.000	1389.875	1006.975	979.625	0.000	
TOTAL CAPITAL COSTS (1000)	10340.875	0.000	0.000	7821.125	4293.475	4041.500	0.000	
ANNUAL O&M ($1000/YR)	0.000	232.199	262.206	330.354	386.002	0.000	493.544	
SLUDGE HANDLING (1000/YR)	0.000	129.803	162.550	179.311	192.505	0.000	218.005	
CHEMICAL (1000/YR)	0.000	117.900	149.378	210.225	245.638	0.000	314.073	
TOTAL ANNUAL O&M (1000/YR)	0.000	479.902	574.134	719.890	824.145	0.000	1025.622	
058 FLORENCE 7A	1958	1975	1979	1980	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	60375.000	0.000	0.000	0.000	21562.500	10781.250	8625.000	0.000
SLUDGE HANDLING COST (1000)	6237.500	0.000	0.000	0.000	2930.000	2011.250	1827.500	0.000
TOTAL CAPITAL COSTS (1000)	65612.500	0.000	0.000	0.000	24492.500	12792.500	10452.500	0.000
ANNUAL O&M ($1000/YR)	0.000	1857.001	1527.443	1389.977	0.000	1845.571	0.000	2333.510
SLUDGE HANDLING (1000/YR)	0.000	402.678	476.820	442.996	0.000	555.099	0.000	675.160
CHEMICAL (1000/YR)	0.000	424.517	528.841	481.247	0.000	638.985	0.000	807.923
TOTAL ANNUAL O&M (1000/YR)	0.000	2684.196	2533.104	2314.219	0.000	3039.655	0.000	3816.593
059 FLORENCE 7B	1958	1975	1979	1980	1985	1995	2007	2020

CAPITAL EXPENDITURES ($1000)	60375.000	0.000	0.000	0.000	21562.500	15093.750	12937.500	0.000
SLUDGE HANDLING COST (1000)	6237.500	0.000	0.000	0.000	2930.000	2378.750	2195.000	0.000
TOTAL CAPITAL COSTS (1000)	66612.500	0.000	0.000	0.000	24492.500	17472.500	15132.500	0.000
ANNUAL O&M ($1000/YR)	0.000	1857.001	1452.113	1296.134	0.000	1875.150	0.000	2522.259
SLUDGE HANDLING (1000/YR)	0.000	402.678	458.285	419.905	0.000	552.376	0.000	721.603
CHEMICAL (1000/YR)	0.000	424.517	502.760	448.756	0.000	649.226	0.000	873.273
TOTAL ANNUAL O&M (1000/YR)	0.000	2684.196	2413.158	2164.795	0.000	3086.752	0.000	4117.135

050 FLORENCE 7C	1958	1975	1979	1980	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	60375.000	0.000	0.000	0.000	28031.250	12937.500	10781.250	0.000
SLUDGE HANDLING COST (1000)	6237.500	0.000	0.000	0.000	3481.250	2195.000	2011.250	0.000
TOTAL CAPITAL COSTS (1000)	66612.500	0.000	0.000	0.000	31512.500	15132.500	12792.500	0.000
ANNUAL O&M ($1000/YR)	0.000	1857.001	1528.506	1391.467	0.000	2048.577	0.000	2595.673
SLUDGE HANDLING (1000/YR)	0.000	402.678	477.082	443.362	0.000	605.050	0.000	739.667
CHEMICAL (1000/YR)	0.000	424.517	529.209	481.762	0.000	709.272	0.000	898.691
TOTAL ANNUAL O&M (1000/YR)	0.000	2684.196	2534.798	2316.591	0.000	3362.899	0.000	4234.031

061 FLORENCE 7D	1958	1975	1979	1980	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	60375.000	0.000	0.000	0.000	19406.250	10781.250	10781.250	0.000
SLUDGE HANDLING COST (1000)	6237.500	0.000	0.000	0.000	2746.250	2011.250	2011.250	0.000
TOTAL CAPITAL COSTS (1000)	66612.500	0.000	0.000	0.000	22152.500	12792.500	12792.500	0.000
ANNUAL O&M ($1000/YR)	0.000	1858.612	1530.209	1393.594	0.000	1834.080	0.000	2316.912
SLUDGE HANDLING (1000/YR)	0.000	402.940	477.501	443.886	0.000	552.271	0.000	671.076
CHEMICAL (1000/YR)	0.000	424.885	529.799	482.499	0.000	635.007	0.000	802.176
TOTAL ANNUAL O&M (1000/YR)	0.000	2686.437	2537.508	2319.979	0.000	3021.358	0.000	3790.164

062 FLORENCE 3A	1958	1975	1979	1980	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	60375.000	0.000	0.000	0.000	21562.500	10781.250	10781.250	0.000
SLUDGE HANDLING COST (1000)	6237.500	0.000	0.000	0.000	2930.000	2011.250	2011.250	0.000
TOTAL CAPITAL COSTS (1000)	66612.500	0.000	0.000	0.000	24492.500	12792.500	12792.500	0.000
ANNUAL O&M ($1000/YR)	0.000	1857.001	1527.443	1392.318	0.000	1852.806	0.000	2341.809
SLUDGE HANDLING (1000/YR)	0.000	402.678	476.820	443.571	0.000	556.879	0.000	677.302
CHEMICAL (1000/YR)	0.000	424.517	528.841	482.057	0.000	641.490	0.000	810.796
TOTAL ANNUAL O&M (1000/YR)	0.000	2684.196	2533.104	2317.946	0.000	3051.175	0.000	3829.907

063 FLORENCE 3B	1958	1975	1979	1980	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	60375.000	0.000	0.000	0.000	21562.500	15093.750	12937.500	0.000
SLUDGE HANDLING COST (1000)	6237.500	0.000	0.000	0.000	2930.000	2378.750	2195.000	0.000
TOTAL CAPITAL COSTS (1000)	66612.500	0.000	0.000	0.000	24492.500	17472.500	15132.500	0.000
ANNUAL O&M ($1000/YR)	0.000	1857.001	1452.113	1302.731	0.000	1923.880	0.000	2589.077
SLUDGE HANDLING (1000/YR)	0.000	402.678	458.285	421.528	0.000	574.367	0.000	738.044
CHEMICAL (1000/YR)	0.000	424.517	502.760	451.040	0.000	666.098	0.000	896.407
TOTAL ANNUAL O&M (1000/YR)	0.000	2684.196	2413.158	2175.299	0.000	3164.344	0.000	4223.528

064 FLORENCE 3C	1958	1975	1979	1980	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	60375.000	0.000	0.000	0.000	30187.500	10781.250	10781.250	0.000
SLUDGE HANDLING COST (1000)	6237.500	0.000	0.000	0.000	3665.000	2011.250	2011.250	0.000
TOTAL CAPITAL COSTS (1000)	66612.500	0.000	0.000	0.000	33852.500	12792.500	12792.500	0.000
ANNUAL O&M ($1000/YR)	0.000	1857.001	1528.506	1393.807	0.000	2055.812	0.000	2603.972
SLUDGE HANDLING (1000/YR)	0.000	402.678	477.082	443.938	0.000	606.830	0.000	741.709
CHEMICAL (1000/YR)	0.000	424.517	529.209	482.573	0.000	711.777	0.000	901.564
TOTAL ANNUAL O&M (1000/YR)	0.000	2684.196	2534.798	2320.318	0.000	3374.419	0.000	4247.246

065 FLORENCE 3D	1958	1975	1979	1980	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	60375.000	0.000	0.000	0.000	19406.250	10781.250	10781.250	0.000
SLUDGE HANDLING COST (1000)	6237.500	0.000	0.000	0.000	2746.250	2011.250	2011.250	0.000
TOTAL CAPITAL COSTS (1000)	66612.500	0.000	0.000	0.000	22152.500	12792.500	12792.500	0.000
ANNUAL O&M ($1000/YR)	0.000	1857.001	1530.209	1395.935	0.000	1841.315	0.000	2325.211

SLUDGE HANDLING (1000/YR)	0.000	402.678	477.501	444.462	0.000	554.051	0.000	673.118
CHEMICAL (1000/YR)	0.000	424.517	529.799	483.310	0.000	637.512	0.000	805.049
TOTAL ANNUAL O&M (1000/YR)	0.000	2684.196	2537.508	2323.706	0.000	3032.878	0.000	3803.378

066 PLATTE SOUTH 5A	1968	1975	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	25875.000	0.000	0.000	8625.000	0.000
SLUDGE HANDLING COST (1000)	2547.500	0.000	0.000	1577.500	0.000
TOTAL CAPITAL COSTS (1000)	28422.500	0.000	0.000	10202.500	0.000
ANNUAL O&M ($1000/YR)	0.000	525.098	525.098	561.682	731.909
SLUDGE HANDLING (1000/YR)	0.000	191.726	191.726	198.719	231.261
CHEMICAL (1000/YR)	0.000	127.552	127.552	136.439	177.788
TOTAL ANNUAL O&M (1000/YR)	0.000	844.375	844.375	895.840	1140.958

067 PLATTE SOUTH 5B	1968	1975	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	25875.000	0.000	0.000	0.000	0.000
SLUDGE HANDLING COST (1000)	2547.500	0.000	0.000	0.000	0.000
TOTAL CAPITAL COSTS (1000)	28422.500	0.000	0.000	0.000	0.000
ANNUAL O&M ($1000/YR)	0.000	525.098	525.098	335.503	497.552
SLUDGE HANDLING (1000/YR)	0.000	191.726	191.726	155.481	186.460
CHEMICAL (1000/YR)	0.000	127.552	127.552	81.497	120.860
TOTAL ANNUAL O&M (1000/YR)	0.000	844.375	844.375	572.481	804.872

068 PLATTE SOUTH 5C	1968	1975	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	25875.000	0.000	0.000	6468.750	0.000
SLUDGE HANDLING COST (1000)	2547.500	0.000	0.000	1456.250	0.000
TOTAL CAPITAL COSTS (1000)	28422.500	0.000	0.000	7925.000	0.000
ANNUAL O&M ($1000/YR)	0.000	525.098	525.098	485.931	702.641
SLUDGE HANDLING (1000/YR)	0.000	191.726	191.726	184.238	225.666
CHEMICAL (1000/YR)	0.000	127.552	127.552	118.038	170.679
TOTAL ANNUAL O&M (1000/YR)	0.000	844.375	844.375	788.206	1098.986

069 PLATTE SOUTH 5D	1968	1975	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	25875.000	0.000	0.000	6468.750	0.000
SLUDGE HANDLING COST (1000)	2547.500	0.000	0.000	1456.250	0.000
TOTAL CAPITAL COSTS (1000)	28422.500	0.000	0.000	7925.000	0.000
ANNUAL O&M ($1000/YR)	0.000	525.098	525.098	548.555	698.552
SLUDGE HANDLING (1000/YR)	0.000	191.726	191.726	196.210	224.884
CHEMICAL (1000/YR)	0.000	127.552	127.552	133.250	169.686
TOTAL ANNUAL O&M (1000/YR)	0.000	844.375	844.375	878.015	1093.122

070 MISSOURI SOUTH 1A1	1980	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	21562.500	19406.250	17250.000	15093.750	0.000
SLUDGE HANDLING COST (1000)	2930.000	2746.250	2562.500	2378.750	0.000
TOTAL CAPITAL COSTS (1000)	24492.500	22152.500	19812.500	17472.500	0.000
ANNUAL O&M ($1000/YR)	220.035	0.000	879.489	0.000	1573.697
SLUDGE HANDLING (1000/YR)	154.021	0.000	312.986	0.000	480.328
CHEMICAL (1000/YR)	74.633	0.000	298.311	0.000	533.777
TOTAL ANNUAL O&M (1000/YR)	448.689	0.000	1490.786	0.000	2587.803

071 MISSOURI SOUTH 1B1	1980	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	12937.500	10781.250	10781.250	8625.000	0.000
SLUDGE HANDLING COST (1000)	2195.000	2011.250	2011.250	1827.500	0.000
TOTAL CAPITAL COSTS (1000)	15132.500	12792.500	12792.500	10452.500	0.000
ANNUAL O&M ($1000/YR)	235.023	0.000	754.376	0.000	1120.594
SLUDGE HANDLING (1000/YR)	157.634	0.000	282.826	0.000	371.105
CHEMICAL (1000/YR)	79.717	0.000	255.874	0.000	380.091
TOTAL ANNUAL O&M (1000/YR)	472.373	0.000	1293.076	0.000	1871.790

		1980	1985	1995	2007	2020
072	MISSOURI SOUTH 1C1					
	CAPITAL EXPENDITURES ($1000)	17250.000	15093.750	12937.500	12937.500	0.000
	SLUDGE HANDLING COST (1000)	2562.500	2378.750	2195.000	2195.000	0.000
	TOTAL CAPITAL COSTS (1000)	19812.500	17472.500	15132.500	15132.500	0.000
	ANNUAL O&M ($1000/YR)	220.035	0.000	754.810	0.000	1279.159
	SLUDGE HANDLING (1000/YR)	154.021	0.000	282.931	0.000	409.328
	CHEMICAL (1000/YR)	74.633	0.000	256.021	0.000	433.874
	TOTAL ANNUAL O&M (1000/YR)	448.689	0.000	1293.762	0.000	2122.360

		1980	1985	1995	2007	2020
073	MISSOURI SOUTH 1D1					
	CAPITAL EXPENDITURES ($1000)	21562.500	21562.500	15093.750	15093.750	0.000
	SLUDGE HANDLING COST (1000)	2930.000	2930.000	2378.750	2378.750	0.000
	TOTAL CAPITAL COSTS (1000)	24492.500	24492.500	17472.500	17472.500	0.000
	ANNUAL O&M ($1000/YR)	220.035	0.000	919.022	0.000	1561.316
	SLUDGE HANDLING (1000/YR)	154.021	0.000	322.515	0.000	477.344
	CHEMICAL (1000/YR)	74.633	0.000	311.720	0.000	529.578
	TOTAL ANNUAL O&M (1000/YR)	448.689	0.000	1553.257	0.000	2568.238

		1980	1985	1995	2007	2020
074	MISSOURI SOUTH 1A2					
	CAPITAL EXPENDITURES ($1000)	21562.500	19406.250	17250.000	15093.750	0.000
	SLUDGE HANDLING COST (1000)	2305.000	2183.750	2062.500	1941.250	0.000
	TOTAL CAPITAL COSTS (1000)	23867.500	21590.000	19312.500	17035.000	0.000
	ANNUAL O&M ($1000/YR)	217.211	0.000	868.412	0.000	1553.062
	SLUDGE HANDLING (1000/YR)	132.484	0.000	255.822	0.000	385.495
	CHEMICAL (1000/YR)	98.367	0.000	393.273	0.000	703.328
	TOTAL ANNUAL O&M (1000/YR)	448.063	0.000	1517.507	0.000	2641.885

		1980	1985	1995	2007	2020
075	MISSOURI SOUTH 1B2					
	CAPITAL EXPENDITURES ($1000)	10781.250	10781.250	10781.250	10781.250	0.000
	SLUDGE HANDLING COST (1000)	1698.750	1698.750	1698.750	1698.750	0.000
	TOTAL CAPITAL COSTS (1000)	12480.000	12480.000	12480.000	12480.000	0.000
	ANNUAL O&M ($1000/YR)	217.211	0.000	680.741	0.000	1024.152
	SLUDGE HANDLING (1000/YR)	132.484	0.000	220.277	0.000	285.319
	CHEMICAL (1000/YR)	98.367	0.000	308.284	0.000	463.803
	TOTAL ANNUAL O&M (1000/YR)	448.063	0.000	1209.301	0.000	1773.274

		1980	1985	1995	2007	2020
076	MISSOURI SOUTH 1C2					
	CAPITAL EXPENDITURES ($1000)	17250.000	17250.000	10781.250	10781.250	0.000
	SLUDGE HANDLING COST (1000)	2062.500	2062.500	1698.750	1698.750	0.000
	TOTAL CAPITAL COSTS (1000)	19312.500	19312.500	12480.000	12480.000	0.000
	ANNUAL O&M ($1000/YR)	217.211	0.000	743.732	0.000	1259.392
	SLUDGE HANDLING (1000/YR)	132.484	0.000	232.207	0.000	329.874
	CHEMICAL (1000/YR)	98.367	0.000	336.810	0.000	570.335
	TOTAL ANNUAL O&M (1000/YR)	448.063	0.000	1312.750	0.000	2159.601

		1980	1985	1995	2007	2020
077	MISSOURI SOUTH 1D2					
	CAPITAL EXPENDITURES ($1000)	21562.500	21562.500	15093.750	12937.500	0.000
	SLUDGE HANDLING COST (1000)	2305.000	2305.000	1941.250	1820.000	0.000
	TOTAL CAPITAL COSTS (1000)	23867.500	23867.500	17035.000	14757.500	0.000
	ANNUAL O&M ($1000/YR)	217.211	0.000	907.944	0.000	1540.681
	SLUDGE HANDLING (1000/YR)	132.484	0.000	263.309	0.000	383.150
	CHEMICAL (1000/YR)	98.367	0.000	411.176	0.000	697.721
	TOTAL ANNUAL O&M (1000/YR)	448.063	0.000	1582.429	0.000	2621.552

		1980	1985	1995	2007	2020
078	MISSOURI SOUTH 3A					
	CAPITAL EXPENDITURES ($1000)	23718.750	21562.500	12937.500	17250.000	0.000
	SLUDGE HANDLING COST (1000)	3113.750	2930.000	2195.000	2562.500	0.000

TOTAL CAPITAL COSTS (1000)	26832.500	24492.500	15132.500	19812.500	0.000
ANNUAL O&M ($1000/YR)	252.400	0.000	1006.558	0.000	1745.512
SLUDGE HANDLING (1000/YR)	161.822	0.000	343.616	0.000	521.745
CHEMICAL (1000/YR)	85.611	0.000	341.411	0.000	592.054
TOTAL ANNUAL O&M (1000/YR)	499.833	0.000	1691.585	0.000	2859.311
079 MISSOURI SOUTH 3B	1980	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	15093.750	15093.750	12937.500	12937.500	0.000
SLUDGE HANDLING COST (1000)	2378.750	2378.750	2195.000	2195.000	0.000
TOTAL CAPITAL COSTS (1000)	17472.500	17472.500	15132.500	15132.500	0.000
ANNUAL O&M ($1000/YR)	283.027	0.000	946.173	0.000	1360.396
SLUDGE HANDLING (1000/YR)	169.205	0.000	329.060	0.000	428.911
CHEMICAL (1000/YR)	95.999	0.000	320.929	0.000	461.428
TOTAL ANNUAL O&M (1000/YR)	548.231	0.000	1596.163	0.000	2250.734
080 MISSOURI SOUTH 3C	1980	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	19406.250	19406.250	12937.500	10781.250	0.000
SLUDGE HANDLING COST (1000)	2746.250	2746.250	2195.000	2011.250	0.000
TOTAL CAPITAL COSTS (1000)	22152.500	22152.500	15132.500	12792.500	0.000
ANNUAL O&M ($1000/YR)	252.400	0.000	881.979	0.000	1442.936
SLUDGE HANDLING (1000/YR)	161.822	0.000	313.562	0.000	448.907
CHEMICAL (1000/YR)	85.611	0.000	299.122	0.000	489.425
TOTAL ANNUAL O&M (1000/YR)	499.833	0.000	1494.662	0.000	2381.168
081 MISSOURI SOUTH 3D	1980	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	23719.750	23719.750	15093.750	15093.750	0.000
SLUDGE HANDLING COST (1000)	3113.750	3113.750	2378.750	2378.750	0.000
TOTAL CAPITAL COSTS (1000)	26832.500	26832.500	17472.500	17472.500	0.000
ANNUAL O&M ($1000/YR)	253.251	0.000	1044.267	0.000	1727.483
SLUDGE HANDLING (1000/YR)	161.379	0.000	357.663	0.000	517.399
CHEMICAL (1000/YR)	85.832	0.000	355.557	0.000	586.039
TOTAL ANNUAL O&M (1000/YR)	500.462	0.000	1757.489	0.000	2830.921
082 PLATTE WEST 2A	1980	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	21562.500	19406.250	17250.000	17250.000	0.000
SLUDGE HANDLING COST (1000)	2305.000	2143.750	2062.500	2062.500	0.000
TOTAL CAPITAL COSTS (1000)	23867.500	21550.000	19312.500	19312.500	0.000
ANNUAL O&M ($1000/YR)	201.120	0.000	874.289	0.000	1460.769
SLUDGE HANDLING (1000/YR)	137.843	0.000	211.459	0.000	394.669
CHEMICAL (1000/YR)	54.052	0.000	216.159	0.000	395.426
TOTAL ANNUAL O&M (1000/YR)	394.059	0.000	1301.907	0.000	2249.864
083 PLATTE WEST 2B	1980	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	15093.750	12937.500	12937.500	10781.250	0.000
SLUDGE HANDLING COST (1000)	1941.250	1820.000	1820.000	1698.750	0.000
TOTAL CAPITAL COSTS (1000)	17035.000	14757.500	14757.500	12480.000	0.000
ANNUAL O&M ($1000/YR)	224.246	0.000	745.349	0.000	1111.148
SLUDGE HANDLING (1000/YR)	134.655	0.000	245.200	0.000	320.658
CHEMICAL (1000/YR)	66.117	0.000	195.614	0.000	291.383
TOTAL ANNUAL O&M (1000/YR)	425.018	0.000	1186.952	0.000	1723.189

084 PLATTE WEST 2C	1980	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	17250.000	15093.750	15093.750	10781.250	0.000
SLUDGE HANDLING COST (1000)	2062.500	1941.250	1941.250	1698.750	0.000
TOTAL CAPITAL COSTS (1000)	19312.500	17035.000	17035.000	12480.000	0.000
ANNUAL O&M ($1000/YR)	206.122	0.000	709.867	0.000	1199.457
SLUDGE HANDLING (1000/YR)	133.883	0.000	237.844	0.000	338.883
CHEMICAL (1000/YR)	54.053	0.000	186.152	0.000	314.640
TOTAL ANNUAL O&M (1000/YR)	394.058	0.000	1133.863	0.000	1852.981

085 PLATTE WEST 2C	1980	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	21562.500	21562.500	15093.750	15093.750	0.000
SLUDGE HANDLING COST (1000)	2305.000	2305.000	1941.250	1941.250	0.000
TOTAL CAPITAL COSTS (1000)	23867.500	23867.500	17035.000	17035.000	0.000
ANNUAL O&M ($1000/YR)	206.122	0.000	860.571	0.000	1448.040
SLUDGE HANDLING (1000/YR)	133.883	0.000	268.945	0.000	390.185
CHEMICAL (1000/YR)	54.053	0.000	225.677	0.000	379.728
TOTAL ANNUAL O&M (1000/YR)	394.058	0.000	1355.193	0.000	2217.953

086 NEWHAWKA 7F2	1985	2020
CAPITAL EXPENDITURES ($1000)	625.148	0.000
SLUDGE HANDLING COST (1000)	2.500	0.000
TOTAL CAPITAL COSTS (1000)	627.648	0.000
ANNUAL O&M ($1000/YR)	15.622	16.514
SLUDGE HANDLING (1000/YR)	.748	.924
CHEMICAL (1000/YR)	2.108	3.312
TOTAL ANNUAL O&M (1000/YR)	18.478	20.751

087 UNION 7F2	1985	2020
CAPITAL EXPENDITURES ($1000)	505.488	0.000
SLUDGE HANDLING COST (1000)	1.500	0.000
TOTAL CAPITAL COSTS (1000)	506.988	0.000
ANNUAL O&M ($1000/YR)	14.437	14.437
SLUDGE HANDLING (1000/YR)	.572	.572
CHEMICAL (1000/YR)	.903	.903
TOTAL ANNUAL O&M (1000/YR)	15.913	15.913

088 PLATTSMOUTH 2E2	1973	1975	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	2388.000	0.000	0.000	1124.835	0.000
SLUDGE HANDLING COST (1000)	860.075	0.000	0.000	10.000	0.000
TOTAL CAPITAL COSTS (1000)	3248.075	0.000	0.000	1134.835	0.000
ANNUAL O&M ($1000/YR)	0.000	49.398	56.332	64.428	66.194
SLUDGE HANDLING (1000/YR)	0.000	17.618	20.155	22.400	23.072
CHEMICAL (1000/YR)	0.000	7.917	9.603	11.096	11.543
TOTAL ANNUAL O&M (1000/YR)	0.000	74.934	86.091	97.923	100.809

089 PLATTSMOUTH 2E2	1973	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	2388.000	0.000	2801.075	1001.889	1037.335	0.000
SLUDGE HANDLING COST (1000)	860.075	0.000	898.055	9.375	10.000	0.000
TOTAL CAPITAL COSTS (1000)	3248.075	0.000	3699.130	1011.264	1047.335	0.000
ANNUAL O&M ($1000/YR)	0.000	49.398	101.818	139.819	0.000	147.189
SLUDGE HANDLING (1000/YR)	0.000	17.618	34.740	51.571	0.000	54.780
CHEMICAL (1000/YR)	0.000	7.917	19.300	30.488	0.000	32.621
TOTAL ANNUAL O&M (1000/YR)	0.000	74.934	155.858	221.878	0.000	234.590

SLUDGE HANDLING FACILITIES

SH1	FLORENCE SLUDGE HAND		1975
	CAPITAL EXPENDITURES	($1000)	0.000
	SLUDGE HANDLING COST	($1000)	6237.500
	TOTAL CAPITAL COSTS	($1000)	6237.500
SH2	SOUTH PLATTE SLUDGE HANDLING		1975
	CAPITAL EXPENDITURES	($1000)	0.000
	SLUDGE HANDLING COST	($1000)	2547.000
	TOTAL CAPITAL COSTS	($1000)	2547.000
SH3	COUNCIL BLUFFS SLUDGE HANDLING		1975
	CAPITAL EXPENDITURES	($1000)	0.000
	SLUDGE HANDLING COST	($1000)	1663.375
	TOTAL CAPITAL COSTS	($1000)	1663.375
SH4	PLATTSMOUTH SLUDGE HANDLING		1975
	CAPITAL EXPENDITURES	($1000)	0.000
	SLUDGE HANDLING COST	($1000)	860.075
	TOTAL CAPITAL COSTS	($1000)	860.075
SH5	PAC JUNCTION SLUDGE HANDLING		1975
	CAPITAL EXPENDITURES	($1000)	0.000
	SLUDGE HANDLING COST	($1000)	9.000
	TOTAL CAPITAL COSTS	($1000)	9.000

BOOSTER PUMPING STATIONS

100 WASH CO RWD 4 7E	1985	2020		
CAPITAL EXPENDITURES ($1000)	24.218	0.000		
ANNUAL O&M ($1000/YR)	.972	.972		
101 FT CALHOUN 7E	1985	1995	2020	
CAPITAL EXPENDITURES ($1000)	41.976	20.222	0.000	
ANNUAL O&M ($1000/YR)	2.588	3.077	3.597	
102 FT CALHOUN 7B	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	69.923	34.988	33.650	0.000
ANNUAL O&M ($1000/YR)	5.761	9.314	14.777	19.944
103 WASHINGTON 5F	1985	1995	2020	
CAPITAL EXPENDITURES ($1000)	23.580	0.000	0.000	
ANNUAL O&M ($1000/YR)	.713	.750	.872	
104 SW WASH CO 5F	1985	1995	2020	
CAPITAL EXPENDITURES ($1000)	47.805	0.000	0.000	
ANNUAL O&M ($1000/YR)	3.514	3.796	4.005	
105 S WASH CO 5F	1985	1995	2020	
CAPITAL EXPENDITURES ($1000)	56.774	0.000	0.000	
ANNUAL O&M ($1000/YR)	5.515	5.819	6.028	
106 WASH CO RWD 8 5F	1985	2020		
CAPITAL EXPENDITURES ($1000)	46.891	0.000		
ANNUAL O&M ($1000/YR)	4.315	4.315		
107 WASH CO RWD 7 5F	1985	2020		
CAPITAL EXPENDITURES ($1000)	34.988	0.000		
ANNUAL O&M ($1000/YR)	2.107	2.129		
108 LOGAN 1F	1985	1995	2020	
CAPITAL EXPENDITURES ($1000)	39.808	0.000	0.000	
ANNUAL O&M ($1000/YR)	1.651	2.099	2.157	
109 HARRISON RWD 5 1F	1985	2020		
CAPITAL EXPENDITURES ($1000)	19.673	0.000		
ANNUAL O&M ($1000/YR)	.585	.585		
110 PERSIA 5F	1985	2020		
CAPITAL EXPENDITURES ($1000)	26.009	0.000		
ANNUAL O&M ($1000/YR)	1.118	1.118		
111 MO VALLEY 2E	1975	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	48.698	48.698	25.625	0.000
ANNUAL O&M ($1000/YR)	3.551	8.424	9.119	9.545
112 MO VALLEY 2B	1975	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	67.519	67.519	30.758	0.000
ANNUAL O&M ($1000/YR)	3.716	12.686	17.358	18.262

113 HARRISON RWD 1 5F	1985	2020			
CAPITAL EXPENDITURES ($1000)	38.671	0.000			
ANNUAL O&M ($1000/YR)	2.725	2.725			
114 MAGNOLIA 2F	1985	1995	2020		
CAPITAL EXPENDITURES ($1000)	56.774	0.000	0.000		
ANNUAL O&M ($1000/YR)	5.168	5.400	5.457		
115 LITTLE SIOUX 2F	1985	1995	2020		
CAPITAL EXPENDITURES ($1000)	64.375	0.000	0.000		
ANNUAL O&M ($1000/YR)	6.363	6.818	6.962		
116 PISGAH 2F	1985	1995	2020		
CAPITAL EXPENDITURES ($1000)	63.069	0.000	0.000		
ANNUAL O&M ($1000/YR)	6.156	6.575	6.720		
117 WOODBINE 3F	1985	1995	2020		
CAPITAL EXPENDITURES ($1000)	50.432	0.000	0.000		
ANNUAL O&M ($1000/YR)	4.158	4.339	4.361		
118 LOGAN 3F	1985	1995	2020		
CAPITAL EXPENDITURES ($1000)	47.805	0.000	0.000		
ANNUAL O&M ($1000/YR)	4.106	4.157	4.157		
119 MO VALLEY 3E	1975	1984	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	48.698	0.000	92.898	23.580	0.000
ANNUAL O&M ($1000/YR)	3.551	4.042	18.547	19.926	20.547
120 MO VALLEY 3B	1975	1984	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	66.903	0.000	103.125	30.758	0.000
ANNUAL O&M ($1000/YR)	3.711	8.177	19.903	26.335	27.434
121 POTT CO RWD1 1F	1985	2020			
CAPITAL EXPENDITURES ($1000)	37.491	0.000			
ANNUAL O&M ($1000/YR)	2.635	2.635			
122 POTT CO RWD2 1F	1985	2020			
CAPITAL EXPENDITURES ($1000)	33.650	0.000			
ANNUAL O&M ($1000/YR)	.296	.296			
123 POTT CO RWD3 1F	1985	2020			
CAPITAL EXPENDITURES ($1000)	40.909	0.000			
ANNUAL O&M ($1000/YR)	3.338	3.338			
124 POTT CO RWD4 1F	1985	2020			
CAPITAL EXPENDITURES ($1000)	31.062	0.000			
ANNUAL O&M ($1000/YR)	1.683	1.697			
125 POTT CO RWD5 1F	1985	2020			
CAPITAL EXPENDITURES ($1000)	34.988	0.000			

ANNUAL O&M ($1000/YR)	2.245	2.245			
126 POTT CO RWD6 1F	1985	2020			
CAPITAL EXPENDITURES ($1000)	33.650	0.000			
ANNUAL O&M ($1000/YR)	3.418	3.418			
127 POTT CO RWD7 1F	1985	2020			
CAPITAL EXPENDITURES ($1000)	27.474	0.000			
ANNUAL O&M ($1000/YR)	1.326	1.326			
128 POTT CO RWD8 1F	1985	1995	2007	2020	
CAPITAL EXPENDITURES ($1000)	40.909	25.625	25.625	0.000	
ANNUAL O&M ($1000/YR)	3.020	3.765	0.000	4.524	
129 CARSON 8F	1985	2020			
CAPITAL EXPENDITURES ($1000)	43.011	0.000			
ANNUAL O&M ($1000/YR)	3.558	3.587			
130 OAKLAND 8F	1985	2020			
CAPITAL EXPENDITURES ($1000)	41.976	0.000			
ANNUAL O&M ($1000/YR)	3.260	3.260			
131 AVOCA 8F	1985	1995	2020		
CAPITAL EXPENDITURES ($1000)	50.432	0.000	0.000		
ANNUAL O&M ($1000/YR)	4.780	4.925	5.141		
132 MCCLELLAND 8F	1995	1995	2020		
CAPITAL EXPENDITURES ($1000)	92.027	0.000	0.000		
ANNUAL O&M ($1000/YR)	16.492	16.926	17.360		
133 NEOLA 8F	1985	1995	2020		
CAPITAL EXPENDITURES ($1000)	86.135	27.474	0.000		
ANNUAL O&M ($1000/YR)	14.489	15.671	16.899		
134 WESTON 8F	1985	2020			
CAPITAL EXPENDITURES ($1000)	38.671	0.000			
ANNUAL O&M ($1000/YR)	3.014	3.014			
135 HONEY CREEK 8F	1985	2020			
CAPITAL EXPENDITURES ($1000)	34.988	0.000			
ANNUAL O&M ($1000/YR)	2.115	2.115			
136 GLENWOOD 1E	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	88.451	56.774	48.698	48.698	0.000
ANNUAL O&M ($1000/YR)	11.243	17.221	23.135	0.000	30.137
137 GLENWOOD 1B	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	92.898	62.404	46.891	46.891	0.000
ANNUAL O&M ($1000/YR)	11.282	18.748	24.297	0.000	32.088
138 MILLS CO RWD1-N 1F	1985	2020			

	CAPITAL EXPENDITURES ($1000)	26.385	0.000				
	ANNUAL O&M ($1000/YR)	1.215	1.215				
139	MILLS CO RWD1-S 1F	1985	2020				
	CAPITAL EXPENDITURES ($1000)	19.102	0.000				
	ANNUAL O&M ($1000/YR)	.558	.558				
140	MILLS CO RWD2-N 1F	1985	2020				
	CAPITAL EXPENDITURES ($1000)	30.758	0.000				
	ANNUAL O&M ($1000/YR)	1.716	1.716				
141	MILLS CO RWD2-S 1F	1985	2020				
	CAPITAL EXPENDITURES ($1000)	22.690	0.000				
	ANNUAL O&M ($1000/YR)	.850	.850				
142	MILLS CO RWD3 1F	1985	2020				
	CAPITAL EXPENDITURES ($1000)	26.385	0.000				
	ANNUAL O&M ($1000/YR)	1.208	1.208				
143	EMERSON 8F	1985	1995	2020			
	CAPITAL EXPENDITURES ($1000)	37.491	0.000	0.000			
	ANNUAL O&M ($1000/YR)	2.325	2.419	2.462			
144	HENDERSON 8F	1985	2020				
	CAPITAL EXPENDITURES ($1000)	24.425	0.000				
	ANNUAL O&M ($1000/YR)	.894	.909				
145	NW MILLS CO 8F	1985	2020				
	CAPITAL EXPENDITURES ($1000)	32.244	0.000				
	ANNUAL O&M ($1000/YR)	1.852	1.852				
146	SW MILLS CO 8F	1985	2020				
	CAPITAL EXPENDITURES ($1000)	32.244	0.000				
	ANNUAL O&M ($1000/YR)	1.852	1.852				
147	GLENWOOD EAST 2F	1985	1995	2020			
	CAPITAL EXPENDITURES ($1000)	72.239	0.000	0.000			
	ANNUAL O&M ($1000/YR)	9.604	9.915	10.060			
149	GLENWOOD 2E	1975	1984	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	88.451	0.000	88.451	49.574	49.574	0.000
	ANNUAL O&M ($1000/YR)	11.243	16.678	23.307	30.708	0.000	39.561
150	GLENWOOD 2B	1975	1984	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	92.898	0.000	92.898	45.957	45.957	0.000
	ANNUAL O&M ($1000/YR)	11.282	18.162	26.350	33.577	0.000	41.512
151	SILVER CITY 3F	1985	2020				
	CAPITAL EXPENDITURES ($1000)	33.923	0.000				
	ANNUAL O&M ($1000/YR)	2.026	2.040				

152 NORTH MILLS CO 3F	1985	2020				
CAPITAL EXPENDITURES ($1000)	45.957	0.000				
ANNUAL O&M ($1000/YR)	3.910	3.924				
153 GLENWOOD EAST 3F	1985	1995	2020			
CAPITAL EXPENDITURES ($1000)	58.956	21.258	0.000			
ANNUAL O&M ($1000/YR)	6.517	6.993	7.138			
154 GLENWOOD 3E	1975	1984	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	88.451	0.000	79.773	48.698	48.698	0.000
ANNUAL O&M ($1000/YR)	11.243	16.678	21.898	27.716	0.000	36.569
155 GLENWOOD 3B	1975	1984	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	92.898	0.000	83.750	46.891	46.891	0.000
ANNUAL O&M ($1000/YR)	11.282	18.162	23.379	30.585	0.000	38.520
156 CASS CO RWD1-1 5F	1974	1975	1995	2020		
CAPITAL EXPENDITURES ($1000)	33.760	0.000	18.504	0.000		
ANNUAL O&M ($1000/YR)	0.000	1.084	1.897	1.897		
157 CASS CO RWD1-2 5F	1974	1975	1995	2020		
CAPITAL EXPENDITURES ($1000)	29.500	0.000	19.391	0.000		
ANNUAL O&M ($1000/YR)	0.000	.867	1.544	1.544		
158 OTOE CO RWD3 5F	1978	1985	2020			
CAPITAL EXPENDITURES ($1000)	29.500	0.000	0.000			
ANNUAL O&M ($1000/YR)	.700	1.156	1.322			
159 CASS CO RWD 3-1 5F	1985	2020				
CAPITAL EXPENDITURES ($1000)	29.500	0.000				
ANNUAL O&M ($1000/YR)	.997	1.329				
160 CASS CO RWD 3-2 1F	1985	2020				
CAPITAL EXPENDITURES ($1000)	28.510	0.000				
ANNUAL O&M ($1000/YR)	1.118	1.284				
161 CASS CO RWD3-3 5F	1985	1995	2020			
CAPITAL EXPENDITURES ($1000)	41.340	19.102	0.000			
ANNUAL O&M ($1000/YR)	2.597	2.982	3.307			
162 CASS CO RWD3-4 1F	1985	1995	2020			
CAPITAL EXPENDITURES ($1000)	51.440	21.258	0.000			
ANNUAL O&M ($1000/YR)	4.283	4.810	5.236			
163 CASS CO RWD3-2 8F	1985	1995	2020			
CAPITAL EXPENDITURES ($1000)	39.130	18.504	0.000			
ANNUAL O&M ($1000/YR)	2.346	2.748	3.037			
164 CASS CO RWD 3-4 8F	1985	1995	2020			
CAPITAL EXPENDITURES ($1000)	58.239	23.580	0.000			
ANNUAL O&M ($1000/YR)	5.477	6.184	6.812			

165	MUD BEDFORD 5F	1959	1975	1995	2020		
	CAPITAL EXPENDITURES ($1000)	685.000	0.000	0.000	0.000		
	ANNUAL O&M ($1000/YR)	0.000	29.869	36.135	36.135		
166	MUD MORMAN 5F	1962	1975	1995	2020		
	CAPITAL EXPENDITURES ($1000)	541.875	0.000	0.000	0.000		
	ANNUAL O&M ($1000/YR)	0.000	35.564	36.135	36.135		
167	MUD POPPLETON 5F	1962	1975	1995	2020		
	CAPITAL EXPENDITURES ($1000)	1144.102	- 0.000	0.000	0.000		
	ANNUAL O&M ($1000/YR)	0.000	35.080	36.135	36.135		
168	MUD WALNUT HILL 5F	1966	1975	1995	2020		
	CAPITAL EXPENDITURES ($1000)	1840.000	0.000	0.000	0.000		
	ANNUAL O&M ($1000/YR)	0.000	41.779	72.270	108.405		
169	MUD TURNER 5F	1954	1975	1995	2020		
	CAPITAL EXPENDITURES ($1000)	1437.500	0.000	0.000	0.000		
	ANNUAL O&M ($1000/YR)	0.000	129.291	130.086	130.086		
170	MUD CORNHUSKER 5A&D	1972	1975	1995	2020		
	CAPITAL EXPENDITURES ($1000)	232.813	0.000	0.000	0.000		
	ANNUAL O&M ($1000/YR)	0.000	3.686	10.840	14.454		
171	MUD CORNHUSKER 5B&C	1972	1975	1995	2020		
	CAPITAL EXPENDITURES ($1000)	232.813	0.000	0.000	0.000		
	ANNUAL O&M ($1000/YR)	0.000	3.686	11.563	18.067		
172	MUD 78TH ST 5F	1969	1975	1995	2020		
	CAPITAL EXPENDITURES ($1000)	1020.664	0.000	0.000	0.000		
	ANNUAL O&M ($1000/YR)	0.000	84.859	86.724	86.724		
173	MUD HARRISON 7A	1966	1975	1995	2020		
	CAPITAL EXPENDITURES ($1000)	1038.281	0.000	*5000.000	0.000		
	ANNUAL O&M ($1000/YR)	0.000	40.110	75.739	131.748		
174	MUD HARRISON 7B	1966	1975	1995	2020		
	CAPITAL EXPENDITURES ($1000)	1038.281	0.000	1150.000	0.000		
	ANNUAL O&M ($1000/YR)	0.000	40.110	72.125	165.137		
175	MUD HARRISON 7C	1966	1975	1995	2020		
	CAPITAL EXPENDITURES ($1000)	1038.281	0.000	1150.000	0.000		
	ANNUAL O&M ($1000/YR)	0.000	40.110	113.608	198.092		
176	MUD HARRISON 7D	1966	1975	1995	2020		
	CAPITAL EXPENDITURES ($1000)	1038.281	0.000	1150.000	0.000		
	ANNUAL O&M ($1000/YR)	0.000	40.110	77.329	127.846		
177	MUD HARTMAN 5A	1955	1975	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	293.750	0.000	650.977	0.000	1437.500	0.000
	ANNUAL O&M ($1000/YR)	0.000	18.277	47.012	75.739	0.000	131.748

178	MUD HARTMAN 5B	1955	1975	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	293.750	0.000	809.375	0.000	1437.500	0.000
	ANNUAL O&M ($1000/YR)	0.000	18.277	45.198	72.125	0.000	165.137
179	MUD HARTMAN 5C	1955	1975	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	293.750	0.000	1150.000	0.000	2012.500	0.000
	ANNUAL O&M ($1000/YR)	0.000	18.277	65.946	113.608	0.000	198.092
180	MUD HARTMAN 5D	1955	1975	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	293.750	0.000	650.977	0.000	1150.000	0.000
	ANNUAL O&M ($1000/YR)	0.000	18.277	47.807	77.329	0.000	127.846
181	MUD HARRISON 2A	1966	1975	1995	2020		
	CAPITAL EXPENDITURES ($1000)	1038.281	0.000	0.000	0.000		
	ANNUAL O&M ($1000/YR)	0.000	40.110	46.831	52.251		
182	MUD HARRISON 2B	1966	1975	1995	2020		
	CAPITAL EXPENDITURES ($1000)	1038.281	0.000	0.000	0.000		
	ANNUAL O&M ($1000/YR)	0.000	40.110	43.217	85.640		
183	MUD HARRISON 2C	1966	1975	1995	2020		
	CAPITAL EXPENDITURES ($1000)	1038.281	0.000	0.000	0.000		
	ANNUAL O&M ($1000/YR)	0.000	40.110	84.700	118.595		
184	MUD HARRISON 2D	1966	1975	1995	2020		
	CAPITAL EXPENDITURES ($1000)	1038.281	0.000	0.000	0.000		
	ANNUAL O&M ($1000/YR)	0.000	40.110	48.421	48.421		
185	MUD RAINWOOD 1A	1975	1995	2020			
	CAPITAL EXPENDITURES ($1000)	1150.000	0.000	0.000			
	ANNUAL O&M ($1000/YR)	25.873	45.903	84.917			
186	MUD RAINWOOD 1B	1975	1995	2020			
	CAPITAL EXPENDITURES ($1000)	1150.000	0.000	0.000			
	ANNUAL O&M ($1000/YR)	25.873	50.661	81.737			
187	MUD RAINWOOD 1C	1975	1995	2020			
	CAPITAL EXPENDITURES ($1000)	1150.000	0.000	0.000			
	ANNUAL O&M ($1000/YR)	25.873	31.943	59.984			
188	MUD RAINWOOD 1D	1975	1995	2020			
	CAPITAL EXPENDITURES ($1000)	1150.000	0.000	0.000			
	ANNUAL O&M ($1000/YR)	25.873	39.748	78.919			
189	MUD RAINWOOD 2A	1975	1995	2020			
	CAPITAL EXPENDITURES ($1000)	1150.000	0.000	0.000			
	ANNUAL O&M ($1000/YR)	25.873	49.216	85.568			
190	MUD RAINWOOD 2B	1975	1995	2020			
	CAPITAL EXPENDITURES ($1000)	1150.000	0.000	0.000			

	ANNUAL O&M ($1000/YR)	25.873	58.828	93.011		
191	MUD RAINWOOD 2C	1975	1995	2020		
	CAPITAL EXPENDITURES ($1000)	1150.000	0.000	0.000		
	ANNUAL O&M ($1000/YR)	25.873	34.256	62.803		
192	MUD RAINWOOD 2D	1975	1995	2020		
	CAPITAL EXPENDITURES ($1000)	1150.000	0.000	0.000		
	ANNUAL O&M ($1000/YR)	25.873	42.061	81.737		
193	MUD RAINWOOD 3A	1975	1995	2020		
	CAPITAL EXPENDITURES ($1000)	1150.000	0.000	0.000		
	ANNUAL O&M ($1000/YR)	25.873	52.757	91.277		
194	MUD RAINWOOD 3B	1975	1995	2020		
	CAPITAL EXPENDITURES ($1000)	1150.000	809.375	0.000		
	ANNUAL O&M ($1000/YR)	25.873	75.016	115.415		
195	MUD RAINWOOD 3C	1975	1995	2020		
	CAPITAL EXPENDITURES ($1000)	1150.000	0.000	0.000		
	ANNUAL O&M ($1000/YR)	25.873	37.797	68.512		
196	MUD RAINWOOD 3D	1975	1995	2020		
	CAPITAL EXPENDITURES ($1000)	1150.000	0.000	0.000		
	ANNUAL O&M ($1000/YR)	25.873	45.602	83.761		
197	MUD 132ND ST 7A	1962	1975	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	1038.281	0.000	0.000	809.375	0.000
	ANNUAL O&M ($1000/YR)	0.000	15.560	52.396	0.000	110.790
198	MUD 132ND ST 7B	1962	1975	1995	2020	
	CAPITAL EXPENDITURES ($1000)	1038.281	0.000	0.000	0.000	
	ANNUAL O&M ($1000/YR)	0.000	15.560	43.290	64.393	
199	MUD 132ND ST 7C	1962	1975	1995	2020	
	CAPITAL EXPENDITURES ($1000)	1038.281	0.000	0.000	0.000	
	ANNUAL O&M ($1000/YR)	0.000	15.560	52.685	70.102	
200	MUD 132ND ST 7D	1962	1975	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	1038.281	0.000	0.000	463.281	0.000
	ANNUAL O&M ($1000/YR)	0.000	15.560	50.155	0.000	91.349
201	MUD 132ND ST 2A	1962	1975	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	1038.281	0.000	0.000	1150.000	0.000
	ANNUAL O&M ($1000/YR)	0.000	15.560	66.850	0.000	139.698
202	MUD 132ND ST 2B	1962	1975	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	1038.281	0.000	0.000	1150.000	0.000
	ANNUAL O&M ($1000/YR)	0.000	15.560	72.198	0.000	143.890
203	MUD 132ND ST 2C	1962	1975	1985	1995	2020

	CAPITAL EXPENDITURES ($1000)	1038.281	0.000	809.375	0.000	0.000
	ANNUAL O&M ($1000/YR)	0.000	15.560	0.000	81.593	99.010
204	MUD 132ND ST 2D	1962	1975	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	1038.281	0.000	0.000	1150.000	0.000
	ANNUAL O&M ($1000/YR)	0.000	15.560	64.609	0.000	141.938
205	MUD FORT ST 7A	1985	1995	2007	2020	
	CAPITAL EXPENDITURES ($1000)	809.375	0.000	809.375	0.000	
	ANNUAL O&M ($1000/YR)	12.358	24.716	0.000	75.233	
206	MUD FORT ST 7C	2007	2020			
	CAPITAL EXPENDITURES ($1000)	650.977	0.000			
	ANNUAL O&M ($1000/YR)	15.357	20.669			
207	MUD FORT ST 7D	1985	1995	2007	2020	
	CAPITAL EXPENDITURES ($1000)	463.281	0.000	809.375	0.000	
	ANNUAL O&M ($1000/YR)	10.877	21.753	0.000	53.624	
208	MUD FORT ST 2A	1985	1995	2007	2020	
	CAPITAL EXPENDITURES ($1000)	809.375	0.000	1150.000	0.000	
	ANNUAL O&M ($1000/YR)	19.585	39.170	0.000	125.822	
209	MUD FORT ST 2C	2007	2020			
	CAPITAL EXPENDITURES ($1000)	1038.281	0.000			
	ANNUAL O&M ($1000/YR)	35.629	71.258			
210	MUD FORT ST 2D	1985	1995	2007	2020	
	CAPITAL EXPENDITURES ($1000)	809.375	0.000	809.375	0.000	
	ANNUAL O&M ($1000/YR)	18.104	36.207	0.000	82.532	
211	MUD I-80 1A1	1985	1995	2007	2020	
	CAPITAL EXPENDITURES ($1000)	1437.500	1437.500	1437.500	0.000	
	ANNUAL O&M ($1000/YR)	70.102	140.204	0.000	306.786	
212	MUD I-80 1B1	1985	1995	2020		
	CAPITAL EXPENDITURES ($1000)	1150.000	938.477	0.000		
	ANNUAL O&M ($1000/YR)	49.722	99.444	138.758		
213	MUD I-80 1C1	1985	1995	2007	2020	
	CAPITAL EXPENDITURES ($1000)	1038.281	1038.281	809.375	0.000	
	ANNUAL O&M ($1000/YR)	41.772	83.544	0.000	164.270	
214	MUD I-80 1D1	1985	1995	2007	2020	
	CAPITAL EXPENDITURES ($1000)	1437.500	1437.500	1351.250	0.000	
	ANNUAL O&M ($1000/YR)	75.414	150.827	0.000	304.184	
215	MUD I-80 1A2	1985	1995	2007	2020	
	CAPITAL EXPENDITURES ($1000)	1437.500	1437.500	1293.750	0.000	
	ANNUAL O&M ($1000/YR)	68.295	136.518	0.000	299.920	

215	MUD I-80 192	1985	1995	2020	
	CAPITAL EXPENDITURES ($1000)	1038.281	809.375	0.000	
	ANNUAL O&M ($1000/YR)	37.797	75.594	106.671	
217	MUD I-80 1C2	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	1038.281	1038.281	615.781	0.000
	ANNUAL O&M ($1000/YR)	40.327	79.858	0.000	157.404
218	MUD I-80 1D1	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	1437.500	1437.500	1150.000	0.000
	ANNUAL O&M ($1000/YR)	73.571	147.142	0.000	297.319
219	MUD I-80 3A	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	1437.500	1437.500	1437.500	0.000
	ANNUAL O&M ($1000/YR)	70.102	140.204	0.000	306.786
220	MUD I-80 3B	1985	1995	2020	
	CAPITAL EXPENDITURES ($1000)	1150.000	938.477	0.000	
	ANNUAL O&M ($1000/YR)	49.722	99.444	138.758	
221	MUD I-80 3C	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	1038.281	1038.281	809.375	0.000
	ANNUAL O&M ($1000/YR)	41.772	83.544	0.000	164.270
222	MUD I-80 3D	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	1437.500	1437.500	1351.250	0.000
	ANNUAL O&M ($1000/YR)	75.414	150.827	0.000	304.184
223	BENNINGTON 5E	1985	1995	2020	
	CAPITAL EXPENDITURES ($1000)	100.781	66.250	0.000	
	ANNUAL O&M ($1000/YR)	3.004	5.011	6.240	
224	BENNINGTON 5B	1980	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	293.750	99.766	90.625	0.000
	ANNUAL O&M ($1000/YR)	7.579	21.350	0.000	25.013
225	SPRINGFIELD 2E	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	100.781	76.406	70.313	0.000
	ANNUAL O&M ($1000/YR)	3.077	5.223	0.000	8.454
226	SPRINGFIELD 2B	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	366.875	104.844	104.844	0.000
	ANNUAL O&M ($1000/YR)	14.611	23.849	0.000	32.073
227	GRETNA 5A&D	1980	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	293.750	171.875	171.875	0.000
	ANNUAL O&M ($1000/YR)	5.425	7.155	0.000	27.318
228	GRETNA 5B	1980	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	375.000	171.875	151.563	0.000
	ANNUAL O&M ($1000/YR)	10.151	23.271	0.000	38.881

No.	Site	Plan	Item					
229	GRETNA	5C	Year	1980	1995	2007	2020	
			CAPITAL EXPENDITURES ($1000)	151.563	90.625	90.625	0.000	
			ANNUAL O&M ($1000/YR)	4.174	9.286	0.000	14.995	
230	CB MT LINCOLN	5A-D	Year	1960	1975	1995	2020	
			CAPITAL EXPENDITURES ($1000)	180.000	0.000	0.000	0.000	
			ANNUAL O&M ($1000/YR)	0.000	3.541	3.541	4.553	
231	CB MT LINCOLN	5B	Year	1960	1975	1995	2020	
			CAPITAL EXPENDITURES ($1000)	180.000 -	0.000	0.000	0.000	
			ANNUAL O&M ($1000/YR)	0.000	3.541	3.541	4.553	
232	CB MT LINCOLN	5C	Year	1960	1975	1995	2020	
			CAPITAL EXPENDITURES ($1000)	180.000	0.000	0.000	0.000	
			ANNUAL O&M ($1000/YR)	0.000	3.541	5.926	4.481	
233	CB GLENDALE	5A	Year	1952	1975	1995	2007	2020
			CAPITAL EXPENDITURES ($1000)	163.750	0.000	0.000	127.187	0.000
			ANNUAL O&M ($1000/YR)	0.000	3.903	6.721	9.864	11.960
234	CB GLENDALE	5B	Year	1952	1975	1995	2020	
			CAPITAL EXPENDITURES ($1000)	163.750	0.000	0.000	0.000	
			ANNUAL O&M ($1000/YR)	0.000	3.903	5.420	6.721	
235	GLENDALE	5C	Year	1952	1975	1995	2007	2020
			CAPITAL EXPENDITURES ($1000)	163.750	0.000	0.000	115.000	0.000
			ANNUAL O&M ($1000/YR)	0.000	3.903	6.360	8.962	10.624
236	GLENDALE	5D	Year	1952	1975	1995	2007	2020
			CAPITAL EXPENDITURES ($1000)	163.750	0.000	0.000	155.625	0.000
			ANNUAL O&M ($1000/YR)	0.000	3.903	7.227	2.385	12.069
237	CB OAK ST	5A	Year	1960	1975	1995	2007	2020
			CAPITAL EXPENDITURES ($1000)	159.687	0.000	0.000	131.250	0.000
			ANNUAL O&M ($1000/YR)	0.000	3.903	7.010	10.261	12.429
238	CB OAK ST	5B	Year	1960	1975	1995	2020	
			CAPITAL EXPENDITURES ($1000)	159.687	0.000	0.000	0.000	
			ANNUAL O&M ($1000/YR)	0.000	3.903	5.709	7.155	
239	CB OAK ST	5C	Year	1960	1975	1995	2007	2020
			CAPITAL EXPENDITURES ($1000)	159.687	0.000	0.000	110.938	0.000
			ANNUAL O&M ($1000/YR)	0.000	3.903	6.649	9.360	11.022
240	CB OAK ST	5D	Year	1960	1975	1995	2007	2020
			CAPITAL EXPENDITURES ($1000)	159.687	0.000	0.000	151.563	0.000
			ANNUAL O&M ($1000/YR)	0.000	3.903	7.516	11.307	13.836
241	CB ISD	5A	Year	1985	1995	2007	2020	
			CAPITAL EXPENDITURES ($1000)	163.750	0.000	102.812	0.000	
			ANNUAL O&M ($1000/YR)	7.873	9.318	12.174	14.126	

242 CB ISD 5B	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	90.625	0.000	110.938	0.000
ANNUAL O&M ($1000/YR)	6.579	7.374	8.856	9.434

243 CB ISD 5C	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	135.312	0.000	102.812	0.000
ANNUAL O&M ($1000/YR)	6.972	7.767	10.334	11.996

244 CB ISD 5D	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	167.812	0.000	115.000	0.000
ANNUAL O&M ($1000/YR)	8.126	9.788	13.112	15.425

245 CB EAST BELLEVUE 6B	1980	1995	2020
CAPITAL EXPENDITURES ($1000)	171.875	0.000	0.000
ANNUAL O&M ($1000/YR)	3.608	9.860	10.496

246 CB POT RURAL 8F	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	503.164	90.625	0.000
ANNUAL O&M ($1000/YR)	36.663	39.748	41.049

247 EAST BELLEVUE 3B	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	159.687	58.125	0.000
ANNUAL O&M ($1000/YR)	5.575	10.264	10.900

248 CASS CO RWD1-1 7F2	1974	1975	1995	2020
CAPITAL EXPENDITURES ($1000)	33.760	0.000	18.504	0.000
ANNUAL O&M ($1000/YR)	0.000	1.084	1.897	1.897

249 CASS CO RWD1-2 7F2	1974	1975	1995	2020
CAPITAL EXPENDITURES ($1000)	29.500	0.000	19.391	0.000
ANNUAL O&M ($1000/YR)	0.000	.867	1.544	1.544

250 OTOE CO RWD3 5F2	1978	1995	2020
CAPITAL EXPENDITURES ($1000)	42.352	20.645	0.000
ANNUAL O&M ($1000/YR)	2.216	3.033	3.460

251 CASS CO RWD1-1 2F2	1974	1975	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	33.760	0.000	24.007	18.504	0.000
ANNUAL O&M ($1000/YR)	0.000	1.084	2.119	2.665	2.716

252 CASS CO RWD1-2 2F2	1974	1975	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	29.500	0.000	24.007	19.391	0.000
ANNUAL O&M ($1000/YR)	0.000	.867	1.830	2.312	2.362

STORAGE FACILITIES

300 ARLINGTON	1975	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	103.154	190.504	82.185	0.000
ANNUAL O&M ($1000/YR)	.584	.956	.979	.979
301 BLAIR	1975	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	16.875	30.937	3.187	0.000
ANNUAL O&M ($1000/YR)	2.524	2.859	2.871	2.871
302 FORT CALHOUN	1975	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	52.687	51.650	48.537	0.000
ANNUAL O&M ($1000/YR)	1.058	1.509	1.622	1.622
303 HERMAN	1975	2020		
CAPITAL EXPENDITURES ($1000)	85.750	0.000		
ANNUAL O&M ($1000/YR)	.624	.624		
304 KENNARD	1975	1985	2020	
CAPITAL EXPENDITURES ($1000)	63.875	37.022	0.000	
ANNUAL O&M ($1000/YR)	.568	.591	.591	
305 WASHINGTON	1985	1995	2020	
CAPITAL EXPENDITURES ($1000)	89.175	85.680	0.000	
ANNUAL O&M ($1000/YR)	.539	.573	.573	
306 DUNLAP	1975	1985	2020	
CAPITAL EXPENDITURES ($1000)	74.375	144.375	0.000	
ANNUAL O&M ($1000/YR)	.595	.877	.877	
307 LITTLE SIOUX	1975	2020		
CAPITAL EXPENDITURES ($1000)	93.625	0.000		
ANNUAL O&M ($1000/YR)	.645	.645		
308 LOGAN	1975	1985	2020	
CAPITAL EXPENDITURES ($1000)	49.990	50.094	0.000	
ANNUAL O&M ($1000/YR)	.764	1.046	1.046	
309 MAGNOLIA	1975	1985	2020	
CAPITAL EXPENDITURES ($1000)	44.280	37.022	0.000	
ANNUAL O&M ($1000/YR)	.525	.548	.548	
310 MISSOURI VALLEY	1975	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	5.625	4.688	1.406	0.000
ANNUAL O&M ($1000/YR)	1.170	1.735	1.904	1.904
311 MODALE	1975	1985	2020	
CAPITAL EXPENDITURES ($1000)	92.669	85.680	0.000	
ANNUAL O&M ($1000/YR)	.550	.584	.584	
312 MONDAMIN	1975	2020		
CAPITAL EXPENDITURES ($1000)	120.626	0.000		
ANNUAL O&M ($1000/YR)	.640	.640		

313	PERSIA	1975	2020		
	CAPITAL EXPENDITURES ($1000)	129.013	0.000		
	ANNUAL O&M ($1000/YR)	.667	.667		
314	PISGAH	1975	2020		
	CAPITAL EXPENDITURES ($1000)	.750	0.000		
	ANNUAL O&M ($1000/YR)	.584	.584		
315	WOODBINE	1975	1985	2020	
	CAPITAL EXPENDITURES ($1000)	152.074	145.086	0.000	
	ANNUAL O&M ($1000/YR)	.742	.967	.967	
316	AVOCA	1975	2020		
	CAPITAL EXPENDITURES ($1000)	.938	0.000		
	ANNUAL O&M ($1000/YR)	.606	.606		
316	AVOCA-1	1975	1985	1995	2020
	CAPITAL EXPENDITURES ($1000)	145.086	214.957	110.143	0.000
	ANNUAL O&M ($1000/YR)	.719	1.170	1.283	1.283
317	CARSON	1975	1985	2020	
	CAPITAL EXPENDITURES ($1000)	98.261	145.086	0.000	
	ANNUAL O&M ($1000/YR)	.568	.794	.794	
318	CRESENT	1975	1985	2020	
	CAPITAL EXPENDITURES ($1000)	48.537	47.707	0.000	
	ANNUAL O&M ($1000/YR)	.606	.629	.629	
319	HANCOCK	1975	1985	2020	
	CAPITAL EXPENDITURES ($1000)	48.330	48.019	0.000	
	ANNUAL O&M ($1000/YR)	.584	.640	.640	
320	MACEDONIA	1975	1985	2020	
	CAPITAL EXPENDITURES ($1000)	96.164	89.175	0.000	
	ANNUAL O&M ($1000/YR)	.561	.606	.606	
321	MCCLELAND	1985	2020		
	CAPITAL EXPENDITURES ($1000)	89.175	0.000		
	ANNUAL O&M ($1000/YR)	.539	.539		
322	MINDEN	1975	1985	2020	
	CAPITAL EXPENDITURES ($1000)	76.125	100.625	0.000	
	ANNUAL O&M ($1000/YR)	.600	.769	.769	
323	NEOLA	1975	1985	1995	2020
	CAPITAL EXPENDITURES ($1000)	134.603	127.615	96.164	0.000
	ANNUAL O&M ($1000/YR)	.685	.855	.922	.922
324	OAKLAND	1975	2020		
	CAPITAL EXPENDITURES ($1000)	3.000	0.000		

	ANNUAL O&M ($1000/YR)	.855	.855		
324	OAKLAND-1	1975	1985	2020	
	CAPITAL EXPENDITURES ($1000)	103.154	263.750	0.000	
	ANNUAL O&M ($1000/YR)	.584	1.148	1.148	
325	TREYNOR	1975	1985	1995	2020
	CAPITAL EXPENDITURES ($1000)	89.175	214.957	145.086	0.000
	ANNUAL O&M ($1000/YR)	.539	.990	1.216	1.216
326	UNDERWOOD	1975	1985	1995	2020
	CAPITAL EXPENDITURES ($1000)	96.164	127.615	110.143	0.000
	ANNUAL O&M ($1000/YR)	.561	.731	.843	.843
327	WALNUT	1975	1985	1995	2020
	CAPITAL EXPENDITURES ($1000)	110.143	145.086	96.164	0.000
	ANNUAL O&M ($1000/YR)	.606	.832	.900	.900
328	EMERSON	1975	1985	2020	
	CAPITAL EXPENDITURES ($1000)	110.143	96.164	0.000	
	ANNUAL O&M ($1000/YR)	.606	.674	.674	
329	GLENWOOD	1975	1985	2020	
	CAPITAL EXPENDITURES ($1000)	12.187	12.187	0.000	
	ANNUAL O&M ($1000/YR)	1.960	2.771	2.771	
329	GLENWOOD-1	1975	2020		
	CAPITAL EXPENDITURES ($1000)	180.024	0.000		
	ANNUAL O&M ($1000/YR)	.832	.832		
329	GLENWOOD-2	1975	1985	1995	2020
	CAPITAL EXPENDITURES ($1000)	317.087	290.419	290.419	0.000
	ANNUAL O&M ($1000/YR)	1.283	1.960	2.637	2.637
329	GLENWOOD-3	1975	2020		
	CAPITAL EXPENDITURES ($1000)	59.950	0.000		
	ANNUAL O&M ($1000/YR)	1.847	1.847		
329	GLENWOOD-4	1975	2020		
	CAPITAL EXPENDITURES ($1000)	49.056	0.000		
	ANNUAL O&M ($1000/YR)	.663	.663		
329	GLENWOOD-5	1975	2020		
	CAPITAL EXPENDITURES ($1000)	54.244	0.000		
	ANNUAL O&M ($1000/YR)	1.227	1.227		
330	HASTINGS	1975	2020		
	CAPITAL EXPENDITURES ($1000)	61.250	0.000		
	ANNUAL O&M ($1000/YR)	.561	.561		
331	HENDERSON	1975	2020		

CAPITAL EXPENDITURES ($1000)	61.250	0.000	
ANNUAL O&M ($1000/YR)	.561	.561	
332 MALVERN	1975	1985	2020
CAPITAL EXPENDITURES ($1000)	120.626	110.143	0.000
ANNUAL O&M ($1000/YR)	.640	.753	.753
333 PACIFIC JUNCTION	1985	2020	
CAPITAL EXPENDITURES ($1000)	117.132	0.000	
ANNUAL O&M ($1000/YR)	.629	.629	
334 SILVER CITY	1975	2020	
CAPITAL EXPENDITURES ($1000)	56.361	0.000	
ANNUAL O&M ($1000/YR)	.550	.550	
335 TABOR	1975	2020	
CAPITAL EXPENDITURES ($1000)	1.594	0.000	
ANNUAL O&M ($1000/YR)	.685	.685	
335 TABOR-1	1975	1985	2020
CAPITAL EXPENDITURES ($1000)	96.164	110.143	0.000
ANNUAL O&M ($1000/YR)	.561	.674	.674
336 ALVO	1975	1985	2020
CAPITAL EXPENDITURES ($1000)	92.669	85.680	0.000
ANNUAL O&M ($1000/YR)	.550	.584	.584
337 AVOCA	1975	2020	
CAPITAL EXPENDITURES ($1000)	96.164	0.000	
ANNUAL O&M ($1000/YR)	.561	.561	
338 EAGLE	1975	1985	2020
CAPITAL EXPENDITURES ($1000)	96.164	127.615	0.000
ANNUAL O&M ($1000/YR)	.561	.731	.731
339 ELMWOOD	1975	1985	2020
CAPITAL EXPENDITURES ($1000)	96.164	180.024	0.000
ANNUAL O&M ($1000/YR)	.561	.900	.900
340 GREENWOOD	1975	1985	2020
CAPITAL EXPENDITURES ($1000)	110.143	127.615	0.000
ANNUAL O&M ($1000/YR)	.606	.776	.776
341 LOUISVILLE	1975	1985	2020
CAPITAL EXPENDITURES ($1000)	87.500	78.750	0.000
ANNUAL O&M ($1000/YR)	.629	.742	.742
343 MURDOCK	1975	1985	2020
CAPITAL EXPENDITURES ($1000)	89.175	110.143	0.000
ANNUAL O&M ($1000/YR)	.539	.652	.652

344 MURRAY	1975	2020
CAPITAL EXPENDITURES ($1000)	100.358	0.000
ANNUAL O&M ($1000/YR)	.575	.575

345 NEHAWKA	1975	1985	2020
CAPITAL EXPENDITURES ($1000)	.787	.281	0.000
ANNUAL O&M ($1000/YR)	.588	.622	.622

346 PLATTSMOUTH	1975	2020
CAPITAL EXPENDITURES ($1000)	663.781	0.000
ANNUAL O&M ($1000/YR)	2.750	2.750

346 PLATTSMOUTH-1	1975	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	53.517	89.000	62.025	0.000
ANNUAL O&M ($1000/YR)	1.148	2.841	2.830	2.890

347 UNION	1975	2020
CAPITAL EXPENDITURES ($1000)	110.143	0.000
ANNUAL O&M ($1000/YR)	.606	.606

348 WEEPING WATER	1975	2020
CAPITAL EXPENDITURES ($1000)	52.169	0.000
ANNUAL O&M ($1000/YR)	1.001	1.001

349 BLAIR B	1975	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	16.875	57.750	13.312	0.000
ANNUAL O&M ($1000/YR)	2.524	2.960	3.010	3.010

350 MISSOURI VALLEY B	1975	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	5.625	37.500	1.500	0.000
ANNUAL O&M ($1000/YR)	1.170	2.842	2.847	2.847

351 PLATTSMOUTH B	1975	2020
CAPITAL EXPENDITURES ($1000)	663.781	0.000
ANNUAL O&M ($1000/YR)	2.750	2.750

351 PLATTSMOUTH-1 B	1975	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	53.517	95.225	48.226	0.000
ANNUAL O&M ($1000/YR)	1.148	2.862	2.865	2.865

352 FORT CALHOUN B	1975	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	52.687	63.062	56.215	0.000
ANNUAL O&M ($1000/YR)	1.058	2.750	2.780	2.780

353 WASH CO RWD I	1985	2020
CAPITAL EXPENDITURES ($1000)	122.500	0.000
ANNUAL O&M ($1000/YR)	.719	.719

354 WASH CO RWD II	1985	2020
CAPITAL EXPENDITURES ($1000)	1.312	0.000
ANNUAL O&M ($1000/YR)	.652	.652

354	WASH CO RWD-1 II	1985	2020
	CAPITAL EXPENDITURES ($1000)	110.143	0.000
	ANNUAL O&M ($1000/YR)	.606	.606
355	WASH CO RWD III	1985	2020
	CAPITAL EXPENDITURES ($1000)	131.250	0.000
	ANNUAL O&M ($1000/YR)	.742	.742
356	WASH CO RWD IV	1985	2020
	CAPITAL EXPENDITURES ($1000)	157.500	0.000
	ANNUAL O&M ($1000/YR)	.809	.809
357	WASH CO RWD V	1985	2020
	CAPITAL EXPENDITURES ($1000)	109.375	0.000
	ANNUAL O&M ($1000/YR)	.685	.685
358	WASH CO RWD VI	1985	2020
	CAPITAL EXPENDITURES ($1000)	210.000	0.000
	ANNUAL O&M ($1000/YR)	.945	.945
359	WASH CO RWD VII	1985	2020
	CAPITAL EXPENDITURES ($1000)	223.125	0.000
	ANNUAL O&M ($1000/YR)	.979	.979
360	WASH CO RWD VIII	1985	2020
	CAPITAL EXPENDITURES ($1000)	58.705	0.000
	ANNUAL O&M ($1000/YR)	1.712	1.712
361	HARR CO RWD I	1985	2020
	CAPITAL EXPENDITURES ($1000)	231.875	0.000
	ANNUAL O&M ($1000/YR)	1.001	1.001
361	HARR CO RWD-1 I	1985	2020
	CAPITAL EXPENDITURES ($1000)	231.875	0.000
	ANNUAL O&M ($1000/YR)	1.001	1.001
362	HARR CO RWD II	1985	2020
	CAPITAL EXPENDITURES ($1000)	227.500	0.000
	ANNUAL O&M ($1000/YR)	.990	.990
362	HARR CO RWD-1 II	1985	2020
	CAPITAL EXPENDITURES ($1000)	227.500	0.000
	ANNUAL O&M ($1000/YR)	.990	.990
363	HARR CO RWD III	1985	2020
	CAPITAL EXPENDITURES ($1000)	183.750	0.000
	ANNUAL O&M ($1000/YR)	.877	.877
363	HARR CO RWD-1 III	1985	2020
	CAPITAL EXPENDITURES ($1000)	183.750	0.000
	ANNUAL O&M ($1000/YR)	.877	.877

364 HARR CO RWD-2 III	1985	2020
CAPITAL EXPENDITURES ($1000)	183.750	0.000
ANNUAL O&M ($1000/YR)	.877	.877
364 HARR CO RWD IV	1985	2020
CAPITAL EXPENDITURES ($1000)	70.000	0.000
ANNUAL O&M ($1000/YR)	.584	.584
364 HARR CO RWD-1 IV	1985	2020
CAPITAL EXPENDITURES ($1000)	70.000	0.000
ANNUAL O&M ($1000/YR)	.584	.584
365 HARR CO RWD V	1985	2020
CAPITAL EXPENDITURES ($1000)	109.375	0.000
ANNUAL O&M ($1000/YR)	.685	.685
365 HARR CO RWD-1 V	1985	2020
CAPITAL EXPENDITURES ($1000)	109.375	0.000
ANNUAL O&M ($1000/YR)	.685	.685
366 HARR CO RWD VI	1985	2020
CAPITAL EXPENDITURES ($1000)	118.125	0.000
ANNUAL O&M ($1000/YR)	.708	.708
366 HARR CO RWD-2 VI	1985	2020
CAPITAL EXPENDITURES ($1000)	118.125	0.000
ANNUAL O&M ($1000/YR)	.708	.708
367 POTT CO RWD I	1985	2020
CAPITAL EXPENDITURES ($1000)	61.610	0.000
ANNUAL O&M ($1000/YR)	2.028	2.028
368 POTT CO RWD II	1985	2020
CAPITAL EXPENDITURES ($1000)	62.025	0.000
ANNUAL O&M ($1000/YR)	2.073	2.073
369 POTT CO RWD III	1985	2020
CAPITAL EXPENDITURES ($1000)	56.007	0.000
ANNUAL O&M ($1000/YR)	1.419	1.419
370 POTT CO RWD IV	1985	2020
CAPITAL EXPENDITURES ($1000)	54.762	0.000
ANNUAL O&M ($1000/YR)	1.283	1.283
371 POTT CO RWD V	1985	2020
CAPITAL EXPENDITURES ($1000)	58.601	0.000
ANNUAL O&M ($1000/YR)	1.701	1.701
372 POTT CO RWD VI	1985	2020
CAPITAL EXPENDITURES ($1000)	546.439	0.000

	ANNUAL O&M ($1000/YR)	2.254	2.254
373	POTT CO RWD VII	1985	2020
	CAPITAL EXPENDITURES ($1000)	58.601	0.000
	ANNUAL O&M ($1000/YR)	1.701	1.701
374	POTT CO RWD VIII	1985	2020
	CAPITAL EXPENDITURES ($1000)	54.036	0.000
	ANNUAL O&M ($1000/YR)	1.204	1.204
375	MILL CO RWD I	1985	2020
	CAPITAL EXPENDITURES ($1000)	50.716	0.000
	ANNUAL O&M ($1000/YR)	.843	.843
375	MILL CO RWD-1 I	1985	2020
	CAPITAL EXPENDITURES ($1000)	54.036	0.000
	ANNUAL O&M ($1000/YR)	1.204	1.204
376	MILL CO RWD II	1985	2020
	CAPITAL EXPENDITURES ($1000)	53.517	0.000
	ANNUAL O&M ($1000/YR)	1.148	1.148
376	MILL CO RWD-1 II	1985	2020
	CAPITAL EXPENDITURES ($1000)	51.131	0.000
	ANNUAL O&M ($1000/YR)	.888	.888
376	MILL CO RWD-2 II	1985	2020
	CAPITAL EXPENDITURES ($1000)	138.098	0.000
	ANNUAL O&M ($1000/YR)	.697	.697
377	MILL CO RWD III	1985	2020
	CAPITAL EXPENDITURES ($1000)	214.375	0.000
	ANNUAL O&M ($1000/YR)	.956	.956
377	MILL CO RWD-1 III	1985	2020
	CAPITAL EXPENDITURES ($1000)	214.375	0.000
	ANNUAL O&M ($1000/YR)	.956	.956
377	MILL CO RWD-2 III	1985	2020
	CAPITAL EXPENDITURES ($1000)	148.580	0.000
	ANNUAL O&M ($1000/YR)	.731	.731
378	CASS CO RWD I	1974	2020
	CAPITAL EXPENDITURES ($1000)	145.086	0.000
	ANNUAL O&M ($1000/YR)	.719	.719
378	CASS CO RWD-1 I	1974	2020
	CAPITAL EXPENDITURES ($1000)	214.957	0.000
	ANNUAL O&M ($1000/YR)	.945	.945
379	CASS CO RWD II	1975	2020

	CAPITAL EXPENDITURES ($1000)	106.648	0.000
	ANNUAL O&M ($1000/YR)	.595	.595
380	CASS CO RWD III	1985	2020
	CAPITAL EXPENDITURES ($1000)	113.750	0.000
	ANNUAL O&M ($1000/YR)	.697	.697
380	CASS CO RWD-1 III	1985	2020
	CAPITAL EXPENDITURES ($1000)	113.750	0.000
	ANNUAL O&M ($1000/YR)	.697	.697
380	CASS CO RWD-2 III	1985	2020
	CAPITAL EXPENDITURES ($1000)	118.125	0.000
	ANNUAL O&M ($1000/YR)	.708	.708
381	OTOE CO RWD III	1975	2020
	CAPITAL EXPENDITURES ($1000)	180.024	0.000
	ANNUAL O&M ($1000/YR)	.832	.832

382 GRETNA A&D	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	62.025	73.438	68.250	72.815	0.000
ANNUAL O&M ($1000/YR)	2.073	2.817	2.887	2.974	2.974

383 GRETNA B	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	62.025	118.050	57.875	59.535	0.000
ANNUAL O&M ($1000/YR)	2.073	2.969	3.004	3.045	3.045

384 GRETNA C	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	62.025	73.438	55.800	54.327	0.000
ANNUAL O&M ($1000/YR)	2.073	2.817	2.845	2.868	2.868

385 SPRINGFIELD	1975	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	92.669	397.094	357.091	0.000
ANNUAL O&M ($1000/YR)	.550	1.678	2.637	2.637

386 SPRINGFIELD B	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	92.669	1997.219	290.419	317.087	0.000
ANNUAL O&M ($1000/YR)	.550	2.928	2.949	2.974	2.974

387 PAPILLION	1975	1985	2000	2020
CAPITAL EXPENDITURES ($1000)	397.094	1197.156	663.781	0.000
ANNUAL O&M ($1000/YR)	1.622	2.856	2.926	2.926

388 OFFUTT	1975	2020
CAPITAL EXPENDITURES ($1000)	37.500	0.000
ANNUAL O&M ($1000/YR)	2.821	2.821

389 BELLEVUE	1975	2020
CAPITAL EXPENDITURES ($1000)	21.412	0.000
ANNUAL O&M ($1000/YR)	2.760	2.760

389 BELLEVUE 1	1975	2020
CAPITAL EXPENDITURES ($1000)	397.094	0.000
ANNUAL O&M ($1000/YR)	1.622	1.622

390 BENNINGTON-1	1975	2020
CAPITAL EXPENDITURES ($1000)	70.000	0.000
ANNUAL O&M ($1000/YR)	.584	.584

390 BENNINGTON	1975	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	263.750	214.957	193.997	0.000
ANNUAL O&M ($1000/YR)	1.058	1.509	1.893	1.893

391 BENNINGTON-1 B	1975	2020
CAPITAL EXPENDITURES ($1000)	70.000	0.000
ANNUAL O&M ($1000/YR)	.584	.584

391 BENNINGTON B	1975	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	263.750	1570.519	439.764	0.000
ANNUAL O&M ($1000/YR)	1.058	2.887	2.928	2.928

392 ELKHORN-1	1975	2020
CAPITAL EXPENDITURES ($1000)	.881	0.000
ANNUAL O&M ($1000/YR)	.600	.600

392 ELKHORN	1975	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	98.261	290.419	170.242	0.000
ANNUAL O&M ($1000/YR)	.568	1.245	1.552	1.552

393 ELKHORN-1 B	1975	2020
CAPITAL EXPENDITURES ($1000)	8.813	0.000
ANNUAL O&M ($1000/YR)	1.554	1.554

393 ELKHORN B	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	98.261	663.781	663.781	541.105	0.000
ANNUAL O&M ($1000/YR)	.568	2.752	2.823	2.877	2.877

394 VALLEY	1975	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	92.669	303.753	204.477	0.000
ANNUAL O&M ($1000/YR)	.550	1.283	1.701	1.701

395 VALLEY B	1975	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	92.669	877.131	311.754	0.000
ANNUAL O&M ($1000/YR)	.550	2.780	2.804	2.804

396 WATERLOO	1975	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	103.154	98.960	114.336	0.000
ANNUAL O&M ($1000/YR)	.584	.661	.787	.787

397 DEER CREEK	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	583.775	343.756	0.000
ANNUAL O&M ($1000/YR)	2.411	2.768	2.768

398 FLORENCE PREC	1985	2020
CAPITAL EXPENDITURES ($1000)	306.420	0.000
ANNUAL O&M ($1000/YR)	1.238	1.238

399 EAST BELLEVUE	1985	1995	2020
CAPITAL EXPENDITURES ($1000)	717.119	180.024	0.000
ANNUAL O&M ($1000/YR)	2.757	2.768	2.768

400 MUD WALNUT HILL	1970	1975	2020
CAPITAL EXPENDITURES ($1000)	450.000	0.000	0.000
ANNUAL O&M ($1000/YR)	0.000	6.064	6.064

401 MUD FIELD CLUB	1954	1975	2020
CAPITAL EXPENDITURES ($1000)	468.750	0.000	0.000
ANNUAL O&M ($1000/YR)	0.000	6.205	6.205

402 MUD 132ND ST	1962	1975	2020
CAPITAL EXPENDITURES ($1000)	112.500	0.000	0.000

ANNUAL O&M ($1000/YR)	0.000	3.526	3.526	
403 MUD 36TH & HARRISON	1985	2020		
CAPITAL EXPENDITURES ($1000)	255.000	0.000		
ANNUAL O&M ($1000/YR)	3.385	3.385		
404 MUD NO. OMAHA	1959	1975	2020	
CAPITAL EXPENDITURES ($1000)	110.143	0.000	0.000	
ANNUAL O&M ($1000/YR)	0.000	.719	.719	
405 MUD RAINWOOD RD	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	375.000	187.500	187.500	0.000
ANNUAL O&M ($1000/YR)	4.090	4.795	5.500	5.500
406 MUD 132ND ST	1985	2020		
CAPITAL EXPENDITURES ($1000)	281.250	0.000		
ANNUAL O&M ($1000/YR)	3.737	3.737		
407 MUD 132ND ST A	2007	2020		
CAPITAL EXPENDITURES ($1000)	131.250	0.000		
ANNUAL O&M ($1000/YR)	3.173	3.173		
408 MUD 132ND ST C	2007	2020		
CAPITAL EXPENDITURES ($1000)	56.250	0.000		
ANNUAL O&M ($1000/YR)	2.891	2.891		
409 MUD 132ND ST D	2007	2020		
CAPITAL EXPENDITURES ($1000)	93.750	0.000		
ANNUAL O&M ($1000/YR)	3.032	3.032		
410 MUD FORT ST E	1985	2020		
CAPITAL EXPENDITURES ($1000)	431.250	0.000		
ANNUAL O&M ($1000/YR)	4.301	4.301		
411 MUD I-80 I&III	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	225.000	281.250	300.000	0.000
ANNUAL O&M ($1000/YR)	3.526	4.583	5.711	5.711
412 MUD I-80 I&III E	1995	2020		
CAPITAL EXPENDITURES ($1000)	93.750	0.000		
ANNUAL O&M ($1000/YR)	3.032	3.032		
413 MUD 78TH HARRISON II	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	225.000	281.250	300.000	0.000
ANNUAL O&M ($1000/YR)	3.526	4.583	5.711	5.711
414 MUD 78&HARRISON IIE	1995	2020		
CAPITAL EXPENDITURES ($1000)	93.750	0.000		
ANNUAL O&M ($1000/YR)	3.032	3.032		
415 CB MT LINCOLN	1960	1975	2020	

CAPITAL EXPENDITURES ($1000)	37.500	0.000	0.000
ANNUAL O&M ($1000/YR)	0.000	2.962	2.962
416 CB GLENDALE	1952	1975	2020
CAPITAL EXPENDITURES ($1000)	37.500	0.000	0.000
ANNUAL O&M ($1000/YR)	0.000	2.962	2.962
417 CB MEMORIAL PARK	1955	1975	2020
CAPITAL EXPENDITURES ($1000)	214.957	0.000	0.000
ANNUAL O&M ($1000/YR)	0.000	1.396	1.396
418 CB SIMMS	1955	1975	2020
CAPITAL EXPENDITURES ($1000)	214.957	0.000	0.000
ANNUAL O&M ($1000/YR)	0.000	1.396	1.396
419 CB GRAND AVE	1985	2020	
CAPITAL EXPENDITURES ($1000)	343.756	0.000	
ANNUAL O&M ($1000/YR)	1.396	1.396	
420 CB GRAND AVE E	2007	2020	
CAPITAL EXPENDITURES ($1000)	290.419	0.000	
ANNUAL O&M ($1000/YR)	1.170	1.170	
421 CB CRESTVIEW A	1995	2020	
CAPITAL EXPENDITURES ($1000)	343.756	0.000	
ANNUAL O&M ($1000/YR)	1.396	1.396	
422 CB CRESTVIEW B&C	1995	2020	
CAPITAL EXPENDITURES ($1000)	214.957	0.000	
ANNUAL O&M ($1000/YR)	.945	.945	
423 CB CRESTVIEW D	1995	2020	
CAPITAL EXPENDITURES ($1000)	397.094	0.000	
ANNUAL O&M ($1000/YR)	1.622	1.622	
424 CB ISO	1985	2020	
CAPITAL EXPENDITURES ($1000)	68.250	0.000	
ANNUAL O&M ($1000/YR)	2.750	2.750	
425 CB ISO E	1995	2020	
CAPITAL EXPENDITURES ($1000)	57.875	0.000	
ANNUAL O&M ($1000/YR)	1.622	1.622	
426 CB ISO A	2007	2020	
CAPITAL EXPENDITURES ($1000)	55.800	0.000	
ANNUAL O&M ($1000/YR)	1.396	1.396	
427 CB ISO B	2007	2020	
CAPITAL EXPENDITURES ($1000)	55.800	0.000	
ANNUAL O&M ($1000/YR)	1.396	1.396	

		2007	2020
428	CB ISD C	2007	2020
	CAPITAL EXPENDITURES ($1000)	53.725	0.000
	ANNUAL O&M ($1000/YR)	1.170	1.170
429	CB ISD D	2007	2020
	CAPITAL EXPENDITURES ($1000)	57.875	0.000
	ANNUAL O&M ($1000/YR)	1.622	1.622

PIPELINE AND PER CAPITA COSTS

550	ARLINGTON	1975	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	0.000	217.500	0.000	50.500	0.000
	ANNUAL O&M ($1000/YR)	4.387	0.000	5.918	0.000	6.362
551	BLAIR	1975	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	0.000	1618.500	0.000	525.000	0.000
	ANNUAL O&M ($1000/YR)	29.715	0.000	41.109	0.000	45.729
552	FT. CALHOUN	1975	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	0.000	355.500	0.000	177.500	0.000
	ANNUAL O&M ($1000/YR)	3.450	0.000	5.953	0.000	7.515
553	KENNARD	1975	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	0.000	2.500	0.000	0.000	0.000
	ANNUAL O&M ($1000/YR)	1.483	0.000	1.500	0.000	1.368
554	WASHINGTON	1975	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	0.000	36.500	0.000	67.500	0.000
	ANNUAL O&M ($1000/YR)	.399	0.000	.656	0.000	1.250
555	HERMAN	1975	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	0.000	0.000	0.000	0.000	0.000
	ANNUAL O&M ($1000/YR)	1.411	0.000	1.368	0.000	1.250
556	DUNLAP	1975	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	0.000	96.500	0.000	13.000	0.000
	ANNUAL O&M ($1000/YR)	5.855	0.000	6.534	0.000	6.648
557	LITTLE SIOUX	1975	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	0.000	22.000	0.000	0.000	0.000
	ANNUAL O&M ($1000/YR)	1.090	0.000	1.245	0.000	1.245
558	LOGAN	1975	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	0.000	127.500	0.000	31.500	0.000
	ANNUAL O&M ($1000/YR)	6.939	0.000	7.836	0.000	8.114
559	MAGNOLIA	1975	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	0.000	0.000	0.000	0.000	0.000
	ANNUAL O&M ($1000/YR)	.905	0.000	.898	0.000	.792
560	MISSOURI VALLEY	1975	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	0.000	205.500	0.000	205.500	0.000
	ANNUAL O&M ($1000/YR)	15.845	0.000	17.292	0.000	19.100
561	MODALE	1975	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	0.000	0.000	0.000	0.000	0.000
	ANNUAL O&M ($1000/YR)	1.287	0.000	1.210	0.000	1.100
562	MODAMIN	1975	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	0.000	0.000	0.000	0.000	0.000
	ANNUAL O&M ($1000/YR)	1.826	0.000	1.738	0.000	1.382

	1975	1985	1995	2007	2020
563 PERSIA	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	0.000	0.000	0.000	0.000
ANNUAL O&M ($1000/YR)	1.381	0.000	1.342	0.000	1.254
564 PISGAH	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	13.000	0.000	0.000	0.000
ANNUAL O&M ($1000/YR)	1.281	0.000	1.373	0.000	1.373
565 WOODBINE	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	175.500	0.000	74.000	0.000
ANNUAL O&M ($1000/YR)	6.244	0.000	7.480	0.000	8.131
566 AVOCA	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	0.000	0.000	0.000	0.000
ANNUAL O&M ($1000/YR)	6.678	0.000	6.376	0.000	6.103
567 CARSON	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	72.000	0.000	6.000	0.000
ANNUAL O&M ($1000/YR)	3.453	0.000	3.960	0.000	4.013
568 CRESENT	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	63.000	0.000	75.000	0.000
ANNUAL O&M ($1000/YR)	1.360	0.000	1.804	0.000	2.464
569 HANCOCK	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	21.000	0.000	5.000	0.000
ANNUAL O&M ($1000/YR)	1.040	0.000	1.188	0.000	1.232
570 MACEDONIA	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	52.500	0.000	17.500	0.000
ANNUAL O&M ($1000/YR)	1.544	0.000	1.914	0.000	2.068
571 MCCLELLAND	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	2.000	0.000	3.000	0.000
ANNUAL O&M ($1000/YR)	.646	0.000	.660	0.000	.686
572 MINDEN	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	46.000	0.000	7.500	0.000
ANNUAL O&M ($1000/YR)	1.986	0.000	2.310	0.000	2.376
573 NEOLA	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	116.000	0.000	97.500	0.000
ANNUAL O&M ($1000/YR)	4.463	0.000	5.280	0.000	6.138
574 OAKLAND	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	108.500	0.000	120.000	0.000
ANNUAL O&M ($1000/YR)	7.244	0.000	8.008	0.000	9.064
575 TREYNOR	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	439.000	0.000	289.500	0.000

ANNUAL O&M ($1000/YR)	2.849	0.000	5.940	0.000	8.488
576 UNDERWOOD	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	198.000	0.000	104.000	0.000
ANNUAL O&M ($1000/YR)	2.214	0.000	3.608	0.000	4.523
577 WALNUT	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	90.000	0.000	75.000	0.000
ANNUAL O&M ($1000/YR)	3.986	0.000	4.620	0.000	5.280
578 EMERSON	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	45.000	0.000	23.000	0.000
ANNUAL O&M ($1000/YR)	2.209	0.000	2.526	0.000	2.728
579 GLENWOOD	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	1189.500	0.000	1046.000	0.000
ANNUAL O&M ($1000/YR)	21.546	0.000	29.920	0.000	39.125
580 HASTINGS	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	0.000	0.000	0.000	0.000
ANNUAL O&M ($1000/YR)	.920	0.000	.572	0.000	.374
581 HENDERSON	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	0.000	0.000	0.000	0.000
ANNUAL O&M ($1000/YR)	.910	0.000	.835	0.000	.748
582 MALVERN	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	0.000	0.000	0.000	0.000
ANNUAL O&M ($1000/YR)	4.979	0.000	4.514	0.000	3.942
583 PACIFIC JUNCTION	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	0.000	0.000	0.000	0.000
ANNUAL O&M ($1000/YR)	2.173	0.000	1.976	0.000	1.729
584 SILVER CITY	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	0.000	0.000	0.000	0.000
ANNUAL O&M ($1000/YR)	1.154	0.000	.981	0.000	.766
585 TABOR	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	55.000	0.000	55.000	0.000
ANNUAL O&M ($1000/YR)	4.308	0.000	4.695	0.000	5.179
586 ALVO	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	0.000	0.000	0.000	0.000
ANNUAL O&M ($1000/YR)	.651	0.000	.596	0.000	.546
587 AVOCA	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	21.000	0.000	4.500	0.000
ANNUAL O&M ($1000/YR)	1.045	0.000	1.192	0.000	1.232
588 EAGLE	1975	1985	1995	2007	2020

CAPITAL EXPENDITURES ($1000)	0.000	168.500	0.000	102.500	0.000
ANNUAL O&M ($1000/YR)	2.237	0.000	3.423	0.000	4.325
589 ELMWOOD	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	104.500	0.000	72.500	0.000
ANNUAL O&M ($1000/YR)	2.595	0.000	3.331	0.000	3.969
590 GREENWOOD	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	181.000	0.000	114.500	0.000
ANNUAL O&M ($1000/YR)	2.545	0.000	3.819	0.000	4.827
591 LOUISVILLE	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	0.000	0.000	0.000	0.000
ANNUAL O&M ($1000/YR)	4.430	0.000	3.916	0.000	3.577
592 MANLEY	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	57.500	0.000	35.000	0.000
ANNUAL O&M ($1000/YR)	.761	0.000	1.166	0.000	1.474
593 MURDOCK	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	26.000	0.000	7.000	0.000
ANNUAL O&M ($1000/YR)	1.199	0.000	1.382	0.000	1.443
594 MURRAY	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	20.500	0.000	0.000	0.000
ANNUAL O&M ($1000/YR)	1.294	0.000	1.439	0.000	1.439
595 NEHAWKA	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	45.500	0.000	27.500	0.000
ANNUAL O&M ($1000/YR)	1.391	0.000	1.712	0.000	1.954
596 PLATTSMOUTH	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	656.500	0.000	175.500	0.000
ANNUAL O&M ($1000/YR)	29.188	0.000	33.810	0.000	35.354
597 UNION	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	0.000	0.000	0.000	0.000
ANNUAL O&M ($1000/YR)	1.183	0.000	1.074	0.000	.981
598 WEEPING WATER	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	115.500	0.000	36.000	0.000
ANNUAL O&M ($1000/YR)	5.232	0.000	6.046	0.000	6.362
599 WATERLOO	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	45.000	0.000	134.500	0.000
ANNUAL O&M ($1000/YR)	2.081	0.000	2.398	0.000	3.582
609 FT CALHOUN B	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	1875.300	0.000	700.000	0.000
ANNUAL O&M ($1000/YR)	5.466	0.000	19.140	0.000	25.520

600 GRETNA C	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	2904.000	0.000	2921.500	0.000
ANNUAL O&M ($1000/YR)	11.962	0.000	32.406	0.000	58.115
601 SPRINGFIELD E	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	1291.500	0.000	1492.000	0.000
ANNUAL O&M ($1000/YR)	5.771	0.000	14.863	0.000	27.993
602 BENNINGTON E	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	851.000	0.000	379.500	0.000
ANNUAL O&M ($1000/YR)	4.503	0.000	10.494	0.000	13.834
603 ELKHORN A	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	833.500	0.000	484.000	0.000
ANNUAL O&M ($1000/YR)	6.677	0.000	12.544	0.000	16.804
604 VALLEY E	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	480.000	0.000	385.000	0.000
ANNUAL O&M ($1000/YR)	7.863	0.000	11.242	0.000	14.630
605 GRETNA A&D	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	2904.000	0.000	0.000	0.000
ANNUAL O&M ($1000/YR)	11.962	0.000	32.406	0.000	0.000
606 ELKHORN C	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	833.500	0.000	484.000	0.000
ANNUAL O&M ($1000/YR)	6.677	0.000	12.544	0.000	16.804
607 ELKHORN D	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	833.500	0.000	0.000	0.000
ANNUAL O&M ($1000/YR)	6.677	0.000	12.544	0.000	0.000
613 SPRINGFIELD B	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	6721.750	0.000	1750.000	0.000
ANNUAL O&M ($1000/YR)	14.279	0.000	61.600	0.000	77.000
614 GRETNA B	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	8205.050	0.000	3500.000	0.000
ANNUAL O&M ($1000/YR)	19.580	0.000	78.375	0.000	109.725
615 ELKHORN B	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	4835.600	0.000	1575.000	0.000
ANNUAL O&M ($1000/YR)	12.592	0.000	47.850	0.000	62.205
616 VALLEY B	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	1191.750	0.000	350.000	0.000
ANNUAL O&M ($1000/YR)	7.636	0.000	16.775	0.000	20.130
617 BENNINGTON B	1975	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	0.000	5010.950	0.000	1575.000	0.000
ANNUAL O&M ($1000/YR)	11.118	0.000	47.025	0.000	61.132

		1975	1985	1995	2007	2020
608	BLAIR B					
	CAPITAL EXPENDITURES ($1000)	0.000	6262.900	0.000	2100.000	0.000
	ANNUAL O&M ($1000/YR)	31.960	0.000	79.200	0.000	99.000

		1975	1985	1995	2007	2020
610	MISSOURI VALLEY B					
	CAPITAL EXPENDITURES ($1000)	0.000	2268.350	0.000	0.000	0.000
	ANNUAL O&M ($1000/YR)	16.685	0.000	34.650	0.000	34.650

		1975	1985	1995	2007	2020
611	GLENWOOD B					
	CAPITAL EXPENDITURES ($1000)	0.000	1952.650	0.000	0.000	0.000
	ANNUAL O&M ($1000/YR)	18.880	0.000	34.100	0.000	34.100

		1975	1985	1995	2007	2020
612	PLATTSMOUTH B					
	CAPITAL EXPENDITURES ($1000)	0.000	4770.150	0.000	0.000	0.000
	ANNUAL O&M ($1000/YR)	30.520	0.000	67.100	0.000	67.100

		1975	1985	1995	2007	2020
618	FLORENCE PREC B					
	CAPITAL EXPENDITURES ($1000)	0.000	700.000	0.000	0.000	0.000
	ANNUAL O&M ($1000/YR)	1.232	0.000	6.160	0.000	6.160

		1975	1985	1995	2007	2020
619	DEER CREEK B					
	CAPITAL EXPENDITURES ($1000)	0.000	1750.000	0.000	700.000	0.000
	ANNUAL O&M ($1000/YR)	3.080	0.000	15.400	0.000	21.560

		1975	1985	1995	2007	2020
620	EAST BELLEVUE B					
	CAPITAL EXPENDITURES ($1000)	0.000	2450.000	0.000	0.000	0.000
	ANNUAL O&M ($1000/YR)	4.312	0.000	21.560	0.000	21.560

		1975	1985	1995	2007	2020
621	METRO OMAHA A	1975	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	0.000	*3412.375	0.000	61555.500	0.000
	ANNUAL O&M ($1000/YR)	1617.820	0.000	2416.243	0.000	2957.932
622	METRO OMAHA B	1975	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	0.000	59476.812	0.000	41635.606	0.000
	ANNUAL O&M ($1000/YR)	1417.527	0.000	1887.515	0.000	2298.773
623	METRO OMAHA C	1975	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	0.000	90032.700	0.000	45888.300	0.000
	ANNUAL O&M ($1000/YR)	1427.720	0.000	2127.574	0.000	2573.455
624	METRO OMAHA D	1975	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	0.000	*7622.637	0.000	58589.950	0.000
	ANNUAL O&M ($1000/YR)	1583.994	0.000	2341.657	0.000	2857.248
625	COUNCIL BLUFFS	1975	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	0.000	5781.750	0.000	7207.500	0.000
	ANNUAL O&M ($1000/YR)	207.951	0.000	248.655	0.000	312.081
626	COUNCIL BLUFFS	1975	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	0.000	4836.325	0.000	1921.719	0.000
	ANNUAL O&M ($1000/YR)	190.967	0.000	229.658	0.000	248.640
627	COUNCIL BLUFFS	1975	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	0.000	4625.400	0.000	4783.200	0.000
	ANNUAL O&M ($1000/YR)	183.690	0.000	219.645	0.000	266.122
628	COUNCIL BLUFFS	1975	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	0.000	5685.387	0.000	8357.719	0.000
	ANNUAL O&M ($1000/YR)	204.486	0.000	244.511	0.000	318.059

629	WASH CO RWD ALL	1985	2020
	CAPITAL EXPENDITURES ($1000)	181.245	0.000
	ANNUAL O&M ($1000/YR)	2.392	2.392
630	WASH CO RWD ALL	1985	2020
	CAPITAL EXPENDITURES ($1000)	6578.123	0.000
	ANNUAL O&M ($1000/YR)	86.831	86.831
631	WASH CO RWD 7E	1980	2020
	CAPITAL EXPENDITURES ($1000)	1760.940	0.000
	ANNUAL O&M ($1000/YR)	23.244	23.244
632	WASH CO RWD 7F	1985	2020
	CAPITAL EXPENDITURES ($1000)	954.035	0.000
	ANNUAL O&M ($1000/YR)	12.593	12.593
633	WASH CO RWD 7B	1980	2020
	CAPITAL EXPENDITURES ($1000)	2647.909	0.000
	ANNUAL O&M ($1000/YR)	34.952	34.952
634	WASH CO RWD 2F	1985	2020
	CAPITAL EXPENDITURES ($1000)	1025.622	0.000
	ANNUAL O&M ($1000/YR)	13.538	13.538
635	HARR CO RWD ALL	1985	2020
	CAPITAL EXPENDITURES ($1000)	2453.205	0.000
	ANNUAL O&M ($1000/YR)	32.382	32.382
636	HARR CO RWD 1F	1985	2020
	CAPITAL EXPENDITURES ($1000)	962.081	0.000
	ANNUAL O&M ($1000/YR)	12.699	12.699
637	HARR CO RWD 1F	1985	2020
	CAPITAL EXPENDITURES ($1000)	6771.740	0.000
	ANNUAL O&M ($1000/YR)	89.387	89.387
638	HARR CO RWD 2F	1985	2020
	CAPITAL EXPENDITURES ($1000)	1999.684	0.000
	ANNUAL O&M ($1000/YR)	26.396	26.396
639	HARR CO RWD 2F	1985	2020
	CAPITAL EXPENDITURES ($1000)	6894.809	0.000
	ANNUAL O&M ($1000/YR)	91.011	91.011
640	HARR CO RWD 2E	1975	2020
	CAPITAL EXPENDITURES ($1000)	1117.582	0.000
	ANNUAL O&M ($1000/YR)	14.752	14.752
641	HARR CO RWD 2E	1975	2020
	CAPITAL EXPENDITURES ($1000)	1968.268	0.000
	ANNUAL O&M ($1000/YR)	25.981	25.981

642	HARR CO RWD 2B	1975	2020
	CAPITAL EXPENDITURES ($1000)	1333.036	0.000
	ANNUAL O&M ($1000/YR)	17.596	17.596
643	HARR CO RWD 2B	1975	2020
	CAPITAL EXPENDITURES ($1000)	2110.249	0.000
	ANNUAL O&M ($1000/YR)	27.855	27.855
644	HARR CO RWD 3F	1985	2020
	CAPITAL EXPENDITURES ($1000)	1878.251	0.000
	ANNUAL O&M ($1000/YR)	24.793	24.793
645	HARR CO RWD 3F	1985	2020
	CAPITAL EXPENDITURES ($1000)	7573.310	0.000
	ANNUAL O&M ($1000/YR)	99.968	99.968
646	HARR CO RWD 3E	1975	2020
	CAPITAL EXPENDITURES ($1000)	977.340	0.000
	ANNUAL O&M ($1000/YR)	12.901	12.901
647	HARR CO RWD 3E	1975	2020
	CAPITAL EXPENDITURES ($1000)	1500.780	0.000
	ANNUAL O&M ($1000/YR)	19.810	19.810
648	HARR CO RWD 3B	1975	2020
	CAPITAL EXPENDITURES ($1000)	1294.140	0.000
	ANNUAL O&M ($1000/YR)	17.083	17.083
649	HARR CO RWD 3B	1975	2020
	CAPITAL EXPENDITURES ($1000)	1817.580	0.000
	ANNUAL O&M ($1000/YR)	23.992	23.992
650	POTT CO RWD 1F	1985	2020
	CAPITAL EXPENDITURES ($1000)	1565.601	0.000
	ANNUAL O&M ($1000/YR)	20.666	20.666
651	POTT CO RWD 1F	1985	2020
	CAPITAL EXPENDITURES ($1000)	16238.632	0.000
	ANNUAL O&M ($1000/YR)	214.350	214.350
652	POTT CO RWD 2F	1985	2020
	CAPITAL EXPENDITURES ($1000)	920.430	0.000
	ANNUAL O&M ($1000/YR)	12.150	12.150
653	POTT CO RWD 8F	1985	2020
	CAPITAL EXPENDITURES ($1000)	5951.885	0.000
	ANNUAL O&M ($1000/YR)	78.565	78.565
654	POTT CO RWD 8F	1985	2020
	CAPITAL EXPENDITURES ($1000)	19207.092	0.000

ANNUAL O&M ($1000/YR)	253.534	253.534
655 MILLS CO RWD 1F	1975	2020
CAPITAL EXPENDITURES ($1000)	326.039	0.000
ANNUAL O&M ($1000/YR)	4.304	4.304
656 MILLS CO RWD 1F	1985	2020
CAPITAL EXPENDITURES ($1000)	13865.616	0.000
ANNUAL O&M ($1000/YR)	183.026	183.026
657 MILLS CO RWD 1F1	1975	2020
CAPITAL EXPENDITURES ($1000)	561.540	0.000
ANNUAL O&M ($1000/YR)	7.412	7.412
658 MILLS CO RWD 1F2	1975	2020
CAPITAL EXPENDITURES ($1000)	1343.842	0.000
ANNUAL O&M ($1000/YR)	17.739	17.739
659 MILLS CO RWD 2F	1975	2020
CAPITAL EXPENDITURES ($1000)	1704.351	0.000
ANNUAL O&M ($1000/YR)	22.497	22.497
660 MILLS CO RWD 2F	1985	2020
CAPITAL EXPENDITURES ($1000)	634.180	0.000
ANNUAL O&M ($1000/YR)	8.371	8.371
661 MILLS CO RWD 2F	1985	2020
CAPITAL EXPENDITURES ($1000)	12473.115	0.000
ANNUAL O&M ($1000/YR)	164.645	164.645
662 MILLS CO RWD 3F	1975	2020
CAPITAL EXPENDITURES ($1000)	3156.093	0.000
ANNUAL O&M ($1000/YR)	41.660	41.660
663 MILLS CO RWD 3F	1975	2020
CAPITAL EXPENDITURES ($1000)	2991.215	0.000
ANNUAL O&M ($1000/YR)	39.484	39.484
664 MILLS CO RWD 3F	1985	2020
CAPITAL EXPENDITURES ($1000)	811.730	0.000
ANNUAL O&M ($1000/YR)	10.715	10.715
665 MILLS CO RWD 3F	1985	2020
CAPITAL EXPENDITURES ($1000)	11334.798	0.000
ANNUAL O&M ($1000/YR)	149.619	149.619
666 CASS CO RWD1 5F	1974	2020
CAPITAL EXPENDITURES ($1000)	717.080	0.000
ANNUAL O&M ($1000/YR)	9.465	9.465
667 CASS CO RWD1 5F	1974	2020

	CAPITAL EXPENDITURES ($1000)	2625.218	0.000
	ANNUAL O&M ($1000/YR)	34.653	34.653
668	CASS CO RWD1 3E	1985	2020
	CAPITAL EXPENDITURES ($1000)	1968.868	0.000
	ANNUAL O&M ($1000/YR)	25.989	25.989
669	CASS CO RWD1 3B	1985	2020
	CAPITAL EXPENDITURES ($1000)	2349.688	0.000
	ANNUAL O&M ($1000/YR)	31.016	31.016
670	CASS CO RWD3 F	1985	2020
	CAPITAL EXPENDITURES ($1000)	889.578	0.000
	ANNUAL O&M ($1000/YR)	11.742	11.742
671	CASS CO RWD3 F	1985	2020
	CAPITAL EXPENDITURES ($1000)	3839.237	0.000
	ANNUAL O&M ($1000/YR)	50.678	50.678
672	CASS CO RWD3 3F	1985	2020
	CAPITAL EXPENDITURES ($1000)	911.886	0.000
	ANNUAL O&M ($1000/YR)	12.037	12.037
673	CASS CO RWD3 3F	1985	2020
	CAPITAL EXPENDITURES ($1000)	3919.024	0.000
	ANNUAL O&M ($1000/YR)	51.731	51.731
674	OTOE CO RWD III 5F1	1978	2020
	CAPITAL EXPENDITURES ($1000)	168.168	0.000
	ANNUAL O&M ($1000/YR)	2.220	2.220
675	OTOE CO RWD III 5F1	1978	2020
	CAPITAL EXPENDITURES ($1000)	2790.854	0.000
	ANNUAL O&M ($1000/YR)	36.839	36.839
676	CASS CO RWD 4 5F	1985	2020
	CAPITAL EXPENDITURES ($1000)	525.960	0.000
	ANNUAL O&M ($1000/YR)	6.943	6.943
677	CASS CO RWD4 3F	1985	2020
	CAPITAL EXPENDITURES ($1000)	63.667	0.000
	ANNUAL O&M ($1000/YR)	.840	.840
678	CASS CO RWD 3F	1985	2020
	CAPITAL EXPENDITURES ($1000)	346.547	0.000
	ANNUAL O&M ($1000/YR)	4.574	4.574
679	CASS CO RWD2 5F	1980	2020
	CAPITAL EXPENDITURES ($1000)	1249.155	0.000
	ANNUAL O&M ($1000/YR)	16.489	16.489

		1985	2020
680	DEER CREEK 7B	1985	2020
	CAPITAL EXPENDITURES ($1000)	733.634	0.000
	ANNUAL O&M ($1000/YR)	9.684	9.684
681	FLORENCE PREC 7B	1985	2020
	CAPITAL EXPENDITURES ($1000)	145.200	0.000
	ANNUAL O&M ($1000/YR)	1.917	1.917
682	DEER CREEK 2B	1985	2020
	CAPITAL EXPENDITURES ($1000)	965.925	0.000
	ANNUAL O&M ($1000/YR)	12.750	12.750
683	FLORENCE PREC 2B	1985	2020
	CAPITAL EXPENDITURES ($1000)	52.800	0.000
	ANNUAL O&M ($1000/YR)	.697	.697
684	EAST BELLEVUE 6B	1985	2020
	CAPITAL EXPENDITURES ($1000)	950.271	0.000
	ANNUAL O&M ($1000/YR)	12.544	12.544
685	EAST BELLEVUE 3B	1985	2020
	CAPITAL EXPENDITURES ($1000)	68.245	0.000
	ANNUAL O&M ($1000/YR)	.901	.901

686 MUD 5F	1975	1985	1990	2020
CAPITAL EXPENDITURES ($1000)	1938.692	3019.630	3992.175	0.000
ANNUAL O&M ($1000/YR)	25.591	65.450	118.147	118.147

687 MUD 1F	1975	1980	2020
CAPITAL EXPENDITURES ($1000)	440.225	799.920	0.000
ANNUAL O&M ($1000/YR)	5.811	16.370	16.370

688 MUD 2F	1975	1980	1985	1990	2020
CAPITAL EXPENDITURES ($1000)	272.250	1140.232	163.350	2912.529	0.000
ANNUAL O&M ($1000/YR)	3.594	18.645	20.801	59.246	59.246

689 MUD 3F	1975	1980	1990	2020
CAPITAL EXPENDITURES ($1000)	440.225	800.448	243.886	0.000
ANNUAL O&M ($1000/YR)	5.811	16.377	19.596	19.596

690 MUD 1A	1980	1985	1990	2007	2020
CAPITAL EXPENDITURES ($1000)	32473.474	23746.325	9233.042	7751.050	0.000
ANNUAL O&M ($1000/YR)	428.650	742.101	863.978	966.291	966.291

691 MUD 1B	1980	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	22400.004	11527.989	2578.300	1350.904	0.000
ANNUAL O&M ($1000/YR)	295.680	447.850	481.883	499.715	499.715

692 MUD 1C	1980	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	23088.383	13704.339	2578.300	5512.777	0.000
ANNUAL O&M ($1000/YR)	304.767	485.664	519.697	592.466	592.466

693 MUD 1D	1980	1985	1990	2007	2020
CAPITAL EXPENDITURES ($1000)	32473.474	25347.487	7839.042	8462.050	0.000
ANNUAL O&M ($1000/YR)	428.650	763.237	866.724	978.423	978.423

694 MUD 2A	1980	1985	1990	2007	2020
CAPITAL EXPENDITURES ($1000)	25759.403	13485.625	14125.351	4756.300	0.000
ANNUAL O&M ($1000/YR)	340.024	518.034	704.489	767.272	767.272

695 MUD 2B	1980	1985	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	15616.036	13885.238	4657.300	1350.904	0.000
ANNUAL O&M ($1000/YR)	206.132	389.417	450.893	468.725	468.725

696 MUD 2C	1980	1985	1990	1995	2007	2020
CAPITAL EXPENDITURES ($1000)	20452.515	14082.248	2336.400	2578.300	5512.777	0.000
ANNUAL O&M ($1000/YR)	269.973	455.859	486.699	520.733	593.502	593.502

697 MUD 2D	1980	1985	1990	2007	2020
CAPITAL EXPENDITURES ($1000)	25759.403	15086.787	12732.251	7141.375	0.000
ANNUAL O&M ($1000/YR)	340.024	539.170	707.235	801.502	801.502

698 MUD 3A	1980	1985	1990	2007	2020
CAPITAL EXPENDITURES ($1000)	32473.474	22198.625	9233.042	6315.550	0.000
ANNUAL O&M ($1000/YR)	428.650	721.672	843.548	926.913	926.913

699	MUD 3B	1980	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	22400.004	11527.989	2578.300	1350.904	0.000
	ANNUAL O&M ($1000/YR)	295.680	447.850	481.883	499.715	499.715
700	MUD 3C	1980	1985	1995	2007	2020
	CAPITAL EXPENDITURES ($1000)	23088.383	13704.339	2578.300	5512.777	0.000
	ANNUAL O&M ($1000/YR)	304.767	485.664	519.697	592.466	592.466
701	MUD 3D	1980	1985	1990	2007	2020
	CAPITAL EXPENDITURES ($1000)	32473.474	25347.487	7839.942	8462.050	0.000
	ANNUAL O&M ($1000/YR)	428.650	763.237	866.724	978.423	978.423
702	MUD BENNINGTON 5H	1985	2020			
	CAPITAL EXPENDITURES ($1000)	815.007	0.000			
	ANNUAL O&M ($1000/YR)	10.758	10.758			
703	MUD BENNINGTON 5B	1985	2020			
	CAPITAL EXPENDITURES ($1000)	2356.926	0.000			
	ANNUAL O&M ($1000/YR)	31.111	31.111			
704	MUD BENNINGTON 5C	1985	2020			
	CAPITAL EXPENDITURES ($1000)	876.517	0.000			
	ANNUAL O&M ($1000/YR)	11.570	11.570			
705	MUD E-V-W 3A	1985	2020			
	CAPITAL EXPENDITURES ($1000)	898.425	0.000			
	ANNUAL O&M ($1000/YR)	11.859	11.859			
706	MUD E-V-W 3B	1985	2020			
	CAPITAL EXPENDITURES ($1000)	3521.800	0.000			
	ANNUAL O&M ($1000/YR)	46.488	46.488			
707	MUD E-V-W 3C	1985	2020			
	CAPITAL EXPENDITURES ($1000)	2178.000	0.000			
	ANNUAL O&M ($1000/YR)	28.750	28.750			
708	MUD E-V-W 3D	1985	2020			
	CAPITAL EXPENDITURES ($1000)	1452.742	0.000			
	ANNUAL O&M ($1000/YR)	19.176	19.176			
709	MUD E-V-W 2E	1985	2020			
	CAPITAL EXPENDITURES ($1000)	1089.000	0.000			
	ANNUAL O&M ($1000/YR)	14.375	14.375			
710	MUD E-V-W 2B	1985	2020			
	CAPITAL EXPENDITURES ($1000)	1760.900	0.000			
	ANNUAL O&M ($1000/YR)	23.244	23.244			
711	MUD GRETNA 6B	1980	2020			
	CAPITAL EXPENDITURES ($1000)	2333.192	0.000			

	ANNUAL O&M ($1000/YR)	30.798	30.798
712	MUD GRETNA 6C	1980	2020
	CAPITAL EXPENDITURES ($1000)	1143.450	0.000
	ANNUAL O&M ($1000/YR)	15.094	15.094
713	MUD GRETNA 2B	1980	2020
	CAPITAL EXPENDITURES ($1000)	2685.372	0.000
	ANNUAL O&M ($1000/YR)	35.447	35.447
714	MUD GRETNA 2C	1980	2020
	CAPITAL EXPENDITURES ($1000)	1143.450	0.000
	ANNUAL O&M ($1000/YR)	15.094	15.094
715	MUD SPRINGFIELD 1E1	1985	2020
	CAPITAL EXPENDITURES ($1000)	674.537	0.000
	ANNUAL O&M ($1000/YR)	8.904	8.904
716	MUD SPRINGFIELD 1B1	1985	2020
	CAPITAL EXPENDITURES ($1000)	1583.010	0.000
	ANNUAL O&M ($1000/YR)	20.896	20.896
717	MUD SPRINGFIELD 8E0	1985	2020
	CAPITAL EXPENDITURES ($1000)	674.537	0.000
	ANNUAL O&M ($1000/YR)	8.904	8.904
718	MUD SPRINGFIELD 8B0	1985	2020
	CAPITAL EXPENDITURES ($1000)	1583.010	0.000
	ANNUAL O&M ($1000/YR)	20.896	20.896
719	SPRINGFIELD 1E2	1985	2020
	CAPITAL EXPENDITURES ($1000)	344.031	0.000
	ANNUAL O&M ($1000/YR)	4.541	4.541
720	SPRINGFIELD 1B2	1985	2020
	CAPITAL EXPENDITURES ($1000)	674.031	0.000
	ANNUAL O&M ($1000/YR)	8.897	8.897
721	KINGS LAKE 5F	1985	2020
	CAPITAL EXPENDITURES ($1000)	45.612	0.000
	ANNUAL O&M ($1000/YR)	.602	.602
722	VALLEY 5E	1985	2020
	CAPITAL EXPENDITURES ($1000)	420.424	0.000
	ANNUAL O&M ($1000/YR)	5.550	5.550
723	VALLEY 5B	1985	2020
	CAPITAL EXPENDITURES ($1000)	507.790	0.000
	ANNUAL O&M ($1000/YR)	6.703	6.703
724	ELKHORN 5E	1985	2020

CAPITAL EXPENDITURES ($1000)	308.630	0.000		
ANNUAL O&M ($1000/YR)	4.074	4.074		
725 ELKHORN 5B	1985	2020		
CAPITAL EXPENDITURES ($1000)	570.115	0.000		
ANNUAL O&M ($1000/YR)	7.526	7.526		
726 COUNCIL BLUFFS 5F	1975	1985	2007	2020
CAPITAL EXPENDITURES ($1000)	992.162	350.658	190.847	0.000
ANNUAL O&M ($1000/YR)	13.097	17.725	20.244	20.244
727 COUNCIL BLUFFS 3F	1985	2020		
CAPITAL EXPENDITURES ($1000)	366.555	0.000		
ANNUAL O&M ($1000/YR)	4.839	4.839		

728 TO NEHAWKA 2F2	1985	2020
CAPITAL EXPENDITURES ($1000)	52.734	0.000
ANNUAL O&M ($1000/YR)	.696	.696
729 TO UNION 2F2	1985	2020
CAPITAL EXPENDITURES ($1000)	39.943	0.000
ANNUAL O&M ($1000/YR)	.527	.527
730 TO WPNG WATER 5F2	1978	2020
CAPITAL EXPENDITURES ($1000)	79.200	0.000
ANNUAL O&M ($1000/YR)	1.045	1.045
731 OTOE CO RWD3 5F2	1978	2020
CAPITAL EXPENDITURES ($1000)	282.748	0.000
ANNUAL O&M ($1000/YR)	3.732	3.732
732 OTOE CO RWD3 5F2	1978	2020
CAPITAL EXPENDITURES ($1000)	2767.850	0.000
ANNUAL O&M ($1000/YR)	36.536	36.536
733 BLAIR RIVER XING 3E	1975	2020
CAPITAL EXPENDITURES ($1000)	81.675	0.000
ANNUAL O&M ($1000/YR)	1.078	1.078
734 BLAIR RIVER XING 3B	1975	2020
CAPITAL EXPENDITURES ($1000)	105.534	0.000
ANNUAL O&M ($1000/YR)	1.393	1.393
735 BELLEVUE R XING 3F	1975	2020
CAPITAL EXPENDITURES ($1000)	132.068	0.000
ANNUAL O&M ($1000/YR)	1.743	1.743

SCHEME REPORT

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TREATMENT PLANTS

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
044	VALLEY 1E	1143.715	436.255	1579.969
046	COUNCIL BLUFFS 1A	7021.493	7607.757	14629.251
058	FLORENCE 7A	33674.765	37515.919	71190.684
066	PLATTE SOUTH 5A	5755.784	11974.126	17729.910
070	MISSOURI SOUTH 1A1	35692.352	11142.679	46835.031
SH1	FLORENCE SLUDGE HAND	6609.587	0.000	6609.587
SH2	PLATTE S SLUDGE HAND	2699.467	0.000	2699.467
SH3	C B SLUDGE HANDLING	1762.601	0.000	1762.601

TOTAL FOR TREATMENT PLANTS

CAPITAL COST:	94359.764
O&M:	68676.736
TOTAL:	163036.500

BOOSTER STATIONS

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
165	MUD BEDFORD 5F	422.980	449.537	872.517
166	MUD MORMAN 5F	267.385	487.799	755.184
167	MUD POPPLETON 5F	564.550	484.547	1049.097
168	MUD WALNUT HILL 5F	664.518	816.020	1480.537
169	MUD TURNER 5F	1274.081	1764.547	3038.628
170	MUD CORNHUSKER 5A&D	51.662	103.180	154.842
172	MUD 78TH ST 5F	287.568	1167.395	1454.963
173	MUD HARRISON 7A	672.158	849.380	1521.538
177	MUD HARTMAN 5A	747.820	702.713	1450.533
185	MUD RAINWOOD 1A	1350.935	536.408	1887.344
197	MUD 132ND ST 7A	586.704	526.159	1112.863
205	MUD FORT ST 7A	538.502	188.539	727.041
211	MUD I-80 1A1	1327.890	944.644	2272.535
223	BENNINGTON 5E	74.913	29.923	104.835
227	GRETNA 5A&D	302.643	82.072	384.715
230	CB MT LINCOLN 5A-D	103.220	49.230	152.450
233	CB GLENDALE 5A	178.882	78.835	257.717
237	CB OAK ST 5A	103.632	81.043	184.674
241	CB ISO 5A	103.349	63.972	167.321

TOTAL FOR BOOSTER STATIONS

CAPITAL COST:	9623.392
O&M:	9405.943
TOTAL:	19029.334

STORAGE FACILITIES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
382	GRETNA A&D	119.814	35.626	155.441
385	SPRINGFIELD	372.196	22.273	394.469
387	PAPILLION	1090.015	33.871	1123.886
388	OFFUTT	37.321	38.381	75.703
389	BELLEVUE	21.310	37.551	58.861
389	BELLEVUE 1	395.203	22.068	417.271
390	BENNINGTON-1	69.667	7.946	77.612
390	BENNINGTON	414.211	20.311	434.522
392	ELKHORN-1	.877	8.163	9.040
392	ELKHORN	281.220	15.417	296.637
394	VALLEY	290.274	16.187	306.461
396	WATERLOO	178.380	9.223	187.603
400	MUD WALNUT HILL	0.000	82.504	82.504
401	MUD FIELD CLUB	50.712	84.422	135.134
402	MUD 132ND ST	4.704	47.973	52.677
403	MUD 36TH & HARRISON	125.987	22.280	148.267
404	MUD NO. OMAHA	6.948	9.782	16.730
405	MUD RAINWOOD RD	244.172	31.280	275.452
406	MUD 132ND ST	138.956	24.597	163.553
407	MUD 132ND ST A	10.435	3.043	13.478
410	MUD FORT ST E	213.066	28.309	241.375
411	MUD I-80 I&III	201.002	29.869	230.871
412	MUD I-80 I&III E	21.995	9.131	31.126
415	CB MT LINCOLN	2.084	40.300	42.384
416	CB GLENDALE	4.892	40.300	45.192
417	CB MEMORIAL PARK	21.074	18.993	40.067
418	CB SIMMS	21.074	18.993	40.067
419	CB GRAND AVE	169.838	9.188	179.026
420	CB GRAND AVE E	23.090	1.122	24.212
421	CB CRESTVIEW A	80.649	4.204	84.853
424	CB ISD	33.720	18.100	51.820
425	CB ISD E	13.578	4.885	18.463
426	CB ISD A	4.436	1.339	5.775

TOTAL FOR STORAGE FACILITIES

CAPITAL COST:	4662.900
O&M:	797.631
TOTAL:	5460.532

PIPELINES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
686	MUD 5F	4693.015	998.979	5691.993
687	MUD 1F	984.399	195.577	1179.975
690	MUD 1A	37566.994	7356.914	44923.909
702	MUD BENNINGTON 5H	393.612	70.809	464.421
715	MUD SPRINGFIELD 1E1	325.771	58.606	384.377
721	KINGS LAKE 5F	37.181	6.687	43.868
722	VALLEY 5E	203.046	36.530	239.576
724	ELKHORN 5E	149.055	26.815	175.869
726	COUNCIL BLUFFS 5F	1157.004	228.964	1385.968
601	SPRINGFIELD E	736.205	154.798	891.003
602	BENNINGTON E	439.602	106.001	545.603
603	ELKHORN A	439.028	135.683	574.711
604	VALLEY E	260.840	133.777	394.617
605	GRETNA A&D	1402.503	269.822	1672.325
621	METRO OMAHA A	59413.216	28073.711	87486.927
625	COUNCIL BLUFFS	3335.634	3175.614	6511.248

TOTAL FOR PIPELINES

CAPITAL COST:	111537.105
O&M:	41029.287
TOTAL:	152566.390

GRAND TOTAL

CAPITAL COST:	220183.161
O&M:	119909.597
TOTAL:	340092.756

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TREATMENT PLANTS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
045	VALLEY	1B	2782.308	1101.334	3883.641
047	COUNCIL BLUFFS	1B	7268.031	7743.793	15011.824
059	FLORENCE	7B	35217.423	37211.780	72429.203
067	PLATTE SOUTH	5B	3258.058	10528.117	13786.175
071	MISSOURI SOUTH 1B1		21703.597	9609.781	31313.378
SH1	FLORENCE SLUDGE HAND		6609.587	0.000	6609.587
SH2	PLATTE S SLUDGE HAND		2699.467	0.000	2699.467
SH3	C B SLUDGE HANDLING		1762.601	0.000	1762.601

TOTAL FOR TREATMENT PLANTS

CAPITAL COST:	81301.072
O&M:	66194.805
TOTAL:	147495.876

BOOSTER STATIONS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
165	MUD BEDFORD	5F	422.980	449.537	872.517
166	MUD MORMAN	5F	267.385	487.799	755.184
167	MUD POPPLETON	5F	564.550	484.547	1049.097
168	MUD WALNUT HILL	5F	664.518	816.020	1480.537
169	MUD TURNER	5F	1274.081	1764.547	3038.628
171	MUD CORNHUSKER	5B&C	51.662	111.167	162.829
172	MUD 78TH ST	5F	287.568	1167.395	1454.963
174	MUD HARRISON	7B	672.158	862.998	1535.156
178	MUD HARTMAN	5B	838.653	716.297	1554.950
186	MUD RAINWOOD	1B	1350.935	555.069	1906.005
198	MUD 132ND ST	7B	512.333	424.639	936.972
212	MUD I-80	1B1	901.981	587.972	1489.954
224	BENNINGTON	5B	276.543	151.654	428.197
228	GRETNA	5B	367.833	184.951	552.784
231	CB MT LINCOLN	5B	103.220	49.230	152.450
234	CB GLENDALE	5B	167.195	64.904	232.099
238	CB OAK ST	5B	91.572	67.045	158.617
242	CB ISD	5B	62.162	49.646	111.808

TOTAL FOR BOOSTER STATIONS

CAPITAL COST:	8877.329
O&M:	8995.417
TOTAL:	17872.747

STORAGE FACILITIES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
383	GRETNA B	138.366	36.812	175.178
386	SPRINGFIELD B	1172.331	29.863	1202.193
387	PAPILLION	1090.015	33.871	1123.886
388	OFFUTT	37.321	38.381	75.703
389	BELLEVUE	21.310	37.551	58.861
389	BELLEVUE 1	395.203	22.068	417.271
391	BENNINGTON-1 B	69.667	7.946	77.612
391	BENNINGTON B	1141.607	31.683	1173.290
393	ELKHORN-1 B	8.771	21.143	29.914
393	ELKHORN B	624.497	28.565	653.062
395	VALLEY B	598.729	28.447	627.176
396	WATERLOO	178.380	9.223	187.603
400	MUD WALNUT HILL	0.000	82.504	82.504
401	MUD FIELD CLUB	50.712	84.422	135.134
402	MUD 132ND ST	4.704	47.973	52.677
403	MUD 36TH & HARRISON	125.987	22.280	148.267
404	MUD NO. OMAHA	6.948	9.782	16.730
405	MUD RAINWOOD RD	244.172	31.280	275.452
406	MUD 132ND ST	138.956	24.597	163.553
411	MUD I-80 I&III	201.002	29.869	230.871
415	CB MT LINCOLN	2.084	40.300	42.384
416	CB GLENDALE	4.892	40.300	45.192
417	CB MEMORIAL PARK	21.074	18.993	40.067
418	CB SIMMS	21.074	18.993	40.067
419	CB GRAND AVE	169.838	9.188	179.026
422	CB CRESTVIEW B&C	50.432	2.846	53.277
424	CB ISD	33.720	18.100	51.820
427	CB ISD B	4.436	1.339	5.775

TOTAL FOR STORAGE FACILITIES

CAPITAL COST:	6556.228
O&M:	808.319
TOTAL:	7364.545

PIPELINES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
686	MUD 5F	4693.015	998.979	5691.993
687	MUD 1F	984.399	195.577	1179.975
691	MUD 1B	21726.951	4159.917	25886.868
703	MUD BENNINGTON 5B	1138.290	204.771	1343.061
711	MUD GRETNA 6B	1611.691	292.745	1904.436
716	MUD SPRINGFIELD 181	764.523	137.536	902.059
721	KINGS LAKE 5F	37.181	6.687	43.868
723	VALLEY 5B	245.240	44.119	289.359
725	ELKHORN 5B	275.340	49.536	324.876
726	COUNCIL BLUFFS 5F	1157.004	228.964	1385.968
613	SPRINGFIELD B	3378.222	536.197	3914.419
614	GRETNA B	4226.506	703.940	4930.446
615	ELKHORN B	2454.104	429.080	2883.184
616	VALLEY B	601.945	170.323	772.268
617	BENNINGTON B	2538.790	413.237	2952.027
622	METRO OMAHA B	31863.168	22950.966	54814.134
626	COUNCIL BLUFFS	2509.567	2884.423	5393.990

TOTAL FOR PIPELINES

CAPITAL COST:	80205.936
O&M:	34406.997
TOTAL:	114612.931

GRAND TOTAL

CAPITAL COST:	176940.565
O&M:	110405.538
TOTAL:	287346.099

Scheme IC1

TREATMENT PLANTS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
044	VALLEY	1E	1143.715	436.255	1579.969
048	COUNCIL BLUFFS	1C	6727.286	7572.457	14299.743
060	FLORENCE	7C	38014.706	39405.935	77420.641
068	PLATTE SOUTH	5C	5198.218	11563.290	16761.508
072	MISSOURI SOUTH	1C1	28510.772	9778.846	38289.617
SH1	FLORENCE SLUDGE HAND		6609.587	0.000	6609.587
SH2	PLATTE S SLUDGE HAND		2699.467	0.000	2699.467
SH3	C B SLUDGE HANDLING		1762.601	0.000	1762.601

TOTAL FOR TREATMENT PLANTS

CAPITAL COST:	90666.352
O&M:	68756.783
TOTAL:	159423.133

BOOSTER STATIONS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
165	MUD BEDFORD	5F	422.980	449.537	872.517
166	MUD MORMAN	5F	267.385	487.799	755.184
167	MUD POPPLETON	5F	564.550	484.547	1049.097
168	MUD WALNUT HILL	5F	664.518	816.020	1480.537
169	MUD TURNER	5F	1274.081	1764.547	3038.628
171	MUD CORNHUSKER	5B&C	51.662	111.167	162.829
172	MUD 78TH ST	5F	287.568	1167.395	1454.963
175	MUD HARRISON	7C	672.158	1139.815	1811.973
179	MUD HARTMAN	5C	1086.817	993.146	2079.963
187	MUD RAINWOOD	1C	1350.935	423.001	1773.936
199	MUD 132ND ST	7C	512.333	485.506	997.839
206	MUD FORT ST	7C	59.816	16.711	76.528
213	MUD I-80	1C1	938.078	543.600	1481.678
223	BENNINGTON	5E	74.913	29.923	104.835
229	GRETNA	5C	156.833	73.755	230.587
232	CB MT LINCOLN	5C	103.220	63.099	166.319
235	GLENDALE	5C	177.762	75.233	252.995
239	CB OAK ST	5C	101.765	77.415	179.181
243	CB ISD	5C	87.041	54.551	141.592

TOTAL FOR BOOSTER STATIONS

CAPITAL COST:	8854.415
O&M:	9256.767
TOTAL:	18111.181

STORAGE FACILITIES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
384	GRETNA C	115.424	35.328	150.751
385	SPRINGFIELD	372.196	22.273	394.469
387	PAPILLION	1090.015	33.871	1123.886
388	OFFUTT	37.321	38.381	75.703
389	BELLEVUE	21.310	37.551	58.861
389	BELLEVUE 1	395.203	22.068	417.271
390	BENNINGTON-1	69.667	7.946	77.612
390	BENNINGTON	414.211	20.311	434.522
392	ELKHORN-1	.877	8.163	9.040
392	ELKHORN	281.220	15.417	296.637
394	VALLEY	290.274	16.187	306.461
396	WATERLOO	178.380	9.223	187.603
400	MUD WALNUT HILL	0.000	82.504	82.504
401	MUD FIELD CLUB	50.712	84.422	135.134
402	MUD 132ND ST	4.704	47.973	52.677
403	MUD 36TH & HARRISON	125.987	22.280	148.267
404	MUD NO. OMAHA	6.948	9.782	16.730
405	MUD RAINWOOD RD	244.172	31.280	275.452
406	MUD 132ND ST	138.956	24.597	163.553
408	MUD 132ND ST C	4.472	2.772	7.245
410	MUD FORT ST E	213.066	28.309	241.375
411	MUD I-80 I&III	201.002	29.869	230.871
412	MUD I-80 I&III E	21.995	9.131	31.126
415	CB MT LINCOLN	2.084	40.300	42.384
416	CB GLENDALE	4.892	40.300	45.192
417	CB MEMORIAL PARK	21.074	18.993	40.067
418	CB SIMMS	21.074	18.993	40.067
419	CB GRAND AVE	169.838	9.188	179.026
420	CB GRAND AVE E	23.090	1.122	24.212
422	CB CRESTVIEW B&C	50.432	2.846	53.277
424	CB ISD	33.720	18.100	51.820
425	CB ISD E	13.578	4.885	18.463
428	CB ISD C	4.272	1.122	5.394

TOTAL FOR STORAGE FACILITIES

CAPITAL COST:	4622.166
O&M:	795.487
TOTAL:	5417.652

PIPELINES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
686	MUD 5F	4693.015	998.979	5691.993
687	MUD 1F	984.399	195.577	1179.975
692	MUD 1C	23567.265	4563.566	28130.831
704	MUD BENNINGTON 5C	423.319	76.153	499.472
712	MUD GRETNA 6C	789.857	143.473	933.330
715	MUD SPRINGFIELD 1E1	325.771	58.606	384.377
721	KINGS LAKE 5F	37.181	6.687	43.868
722	VALLEY 5E	203.046	36.530	239.576
724	ELKHORN 5E	149.055	26.815	175.869
726	COUNCIL BLUFFS 5F	1157.004	228.964	1385.968
600	GRETNA C	1622.727	330.301	1953.028
601	SPRINGFIELD E	736.205	154.798	891.003
602	BENNINGTON E	439.602	106.001	545.603
604	VALLEY E	260.840	133.777	394.617
606	ELKHORN C	439.028	135.683	574.711
623	METRO OMAHA C	46940.871	24708.756	71649.627
627	COUNCIL BLUFFS	2594.423	2795.186	5389.609

TOTAL FOR PIPELINES

CAPITAL COST:	85363.608
O&M:	34699.852
TOTAL:	120063.457

GRAND TOTAL

CAPITAL COST:	189506.541
O&M:	113508.889
TOTAL:	303015.423

TREATMENT PLANTS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
044	VALLEY	1E	1143.715	436.255	1579.969
049	COUNCIL BLUFFS	1D	7104.551	7634.020	14738.571
061	FLORENCE	7D	32683.689	37443.111	70126.800
069	PLATTE SOUTH	5D	5198.218	11860.721	17058.938
073	MISSOURI SOUTH	1D1	36309.022	11401.172	47710.194
SH1	FLORENCE SLUDGE HAND		6609.587	0.000	6609.587
SH2	PLATTE S SLUDGE HAND		2699.467	0.000	2699.467
SH3	C B SLUDGE HANDLING		1762.601	0.000	1762.601

TOTAL FOR TREATMENT PLANTS

CAPITAL COST:	93510.850
O&M:	68775.279
TOTAL:	162286.127

BOOSTER STATIONS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
165	MUD BEDFORD	5F	422.980	449.537	872.517
166	MUD MORMAN	5F	267.385	487.799	755.184
167	MUD POPPLETON	5F	564.550	484.547	1049.097
168	MUD WALNUT HILL	5F	664.518	816.020	1480.537
169	MUD TURNER	5F	1274.081	1764.547	3038.628
170	MUD CORNHUSKER	5A&D	51.662	103.180	154.842
172	MUD 78TH ST	5F	287.568	1167.395	1454.963
176	MUD HARRISON	7D	672.158	854.615	1526.773
180	MUD HARTMAN	5D	721.403	707.948	1429.351
188	MUD RAINWOOD	1D	1350.935	488.336	1839.272
200	MUD 132ND ST	7D	554.902	492.826	1047.728
207	MUD FORT ST	7D	340.037	152.835	492.872
214	MUD I-80	1D1	1319.965	989.322	2309.287
223	BENNINGTON	5E	74.913	29.923	104.835
227	GRETNA	5A&D	302.643	82.072	384.715
230	CB MT LINCOLN	5A-D	103.220	49.230	152.450
236	GLENDALE	5D	181.495	71.075	252.569
240	CB OAK ST	5D	105.498	85.615	191.113
244	CB ISO	5D	106.798	67.557	174.355

TOTAL FOR BOOSTER STATIONS

CAPITAL COST:	9366.711
O&M:	9344.379
TOTAL:	18711.088

STORAGE FACILITIES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
382	GRETNA A&D	119.814	35.626	155.441
385	SPRINGFIELD	372.196	22.273	394.469
387	PAPILLION	1090.015	33.871	1123.886
388	OFFUTT	37.321	38.381	75.703
389	BELLEVUE	21.310	37.551	58.861
389	BELLEVUE 1	395.203	22.068	417.271
390	BENNINGTON-1	69.667	7.946	77.612
390	BENNINGTON	414.211	20.311	434.522
392	ELKHORN-1	.877	8.163	9.040
392	ELKHORN	281.220	15.417	296.637
394	VALLEY	290.274	16.187	306.461
396	WATERLOO	178.380	9.223	187.603
400	MUD WALNUT HILL	0.000	82.504	82.504
401	MUD FIELD CLUB	50.712	84.422	135.134
402	MUD 132ND ST	4.704	47.973	52.677
403	MUD 36TH & HARRISON	125.987	22.280	148.267
404	MUD NO. OMAHA	6.948	9.782	16.730
405	MUD RAINWOOD RD	244.172	31.280	275.452
406	MUD 132ND ST	138.956	24.597	163.553
409	MUD 132ND ST D	7.454	2.908	10.361
410	MUD FORT ST E	213.066	28.309	241.375
411	MUD I-80 I&III	201.002	29.869	230.871
412	MUD I-80 I&III E	21.995	9.131	31.126
415	CB MT LINCOLN	2.084	40.300	42.384
416	CB GLENDALE	4.892	40.300	45.192
417	CB MEMORIAL PARK	21.074	18.993	40.067
418	CB SIMMS	21.074	18.993	40.067
419	CB GRAND AVE	169.838	9.188	179.026
420	CB GRAND AVE E	23.090	1.122	24.212
423	CB CRESTVIEW D	93.163	4.885	98.048
424	CB ISD	33.720	18.100	51.820
425	CB ISD E	13.578	4.885	18.463
429	CB ISD D	4.601	1.555	6.157

TOTAL FOR STORAGE FACILITIES

CAPITAL COST:	4672.598
O&M:	798.393
TOTAL:	5470.992

PIPELINES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
686	MUD 5F	4693.015	998.979	5691.993
687	MUD 1F	984.399	195.577	1179.975
693	MUD 1D	37928.755	7443.595	45372.350
702	MUD BENNINGTON 5H	393.612	70.809	464.421
715	MUD SPRINGFIELD 1E1	325.771	58.606	384.377
721	KINGS LAKE 5F	37.181	6.687	43.868
722	VALLEY 5E	203.046	36.530	239.576
724	ELKHORN 5E	149.055	26.815	175.869
726	COUNCIL BLUFFS 5F	1157.004	228.964	1385.968
601	SPRINGFIELD E	736.205	154.798	891.003
602	BENNINGTON E	439.602	106.001	545.603
604	VALLEY E	260.840	133.777	394.617
605	GRETNA A&D	1402.503	269.822	1672.325
607	ELKHORN D	402.543	118.196	520.739
624	METRO OMAHA D	56393.485	27305.619	83699.104
628	COUNCIL BLUFFS	3375.799	3134.328	6510.127

TOTAL FOR PIPELINES

CAPITAL COST:	108882.815
O&M:	40289.103
TOTAL:	149171.915

GRAND TOTAL

CAPITAL COST:	216432.974
O&M:	119207.154
TOTAL:	335640.122

Scheme IA2

TREATMENT PLANTS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
040	SPRINGFIELD	1E2	895.500	284.750	1180.250
044	VALLEY	1E	1143.715	436.255	1579.969
046	COUNCIL BLUFFS	1A	7021.493	7607.757	14629.251
066	PLATTE SOUTH	5A	5755.784	11974.126	17729.910
074	MISSOURI SOUTH	1A2	34785.046	11315.731	46100.777
SH1	FLORENCE SLUDGE HAND		6609.587	0.000	6609.587
SH2	PLATTE S SLUDGE HAND		2699.467	0.000	2699.467
SH3	C B SLUDGE HANDLING		1762.601	0.000	1762.601

TOTAL FOR TREATMENT PLANTS

CAPITAL COST:	60673.193
O&M:	31618.619
TOTAL:	92291.812

BOOSTER STATIONS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
165	MUD BEDFORD	5F	422.980	449.537	872.517
166	MUD MORMAN	5F	267.385	487.799	755.184
167	MUD POPPLETON	5F	564.550	484.547	1049.097
168	MUD WALNUT HILL	5F	664.518	816.020	1480.537
169	MUD TURNER	5F	1274.081	1764.547	3038.628
170	MUD CORNHUSKER	5A&D	51.662	103.180	154.842
172	MUD 78TH ST	5F	287.568	1167.395	1454.963
173	MUD HARRISON	7A	672.158	849.380	1521.538
177	MUD HARTMAN	5A	747.820	702.713	1450.533
185	MUD RAINWOOD	1A	1350.935	536.408	1887.344
197	MUD 132ND ST	7A	586.704	526.159	1112.863
205	MUD FORT ST	7A	538.502	188.539	727.041
215	MUD I-80	1A2	1314.682	921.136	2235.817
223	BENNINGTON	5E	74.913	29.923	104.835
227	GRETNA	5A&D	302.643	82.072	384.715
230	CB MT LINCOLN	5A-D	103.220	49.230	152.450
233	CB GLENDALE	5A	178.882	78.835	257.717
237	CB OAK ST	5A	103.632	81.043	184.674
241	CB ISO	5A	103.349	63.972	167.321

TOTAL FOR BOOSTER STATIONS

CAPITAL COST:	9610.184
O&M:	9382.435
TOTAL:	18992.616

STORAGE FACILITIES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
382	GRETNA A&D	119.814	35.626	155.441
385	SPRINGFIELD	372.196	22.273	394.469
387	PAPILLION	1090.015	33.871	1123.886
388	OFFUTT	37.321	38.381	75.703
389	BELLEVUE	21.310	37.551	58.861
389	BELLEVUE 1	395.203	22.068	417.271
390	BENNINGTON-1	69.667	7.946	77.612
390	BENNINGTON	414.211	20.311	434.522
392	ELKHORN-1	.877	8.163	9.040
392	ELKHORN	281.220	15.417	296.637
394	VALLEY	290.274	16.187	306.461
396	WATERLOO	178.380	9.223	187.603
400	MUD WALNUT HILL	0.000	82.504	82.504
401	MUD FIELD CLUB	50.712	84.422	135.134
402	MUD 132ND ST	4.704	47.973	52.677
403	MUD 36TH & HARRISON	125.987	22.280	148.267
404	MUD NO. OMAHA	6.948	9.782	16.730
405	MUD RAINWOOD RD	244.172	31.280	275.452
406	MUD 132ND ST	138.956	24.597	163.553
407	MUD 132ND ST A	10.435	3.043	13.478
410	MUD FORT ST E	213.066	28.309	241.375
411	MUD I-80 I&III	201.002	29.869	230.871
412	MUD I-80 I&III E	21.995	9.131	31.126
415	CB MT LINCOLN	2.084	40.300	42.384
416	CB GLENDALE	4.892	40.300	45.192
417	CB MEMORIAL PARK	21.074	18.993	40.067
418	CB SIMMS	21.074	18.993	40.067
419	CB GRAND AVE	169.838	9.188	179.026
420	CB GRAND AVE E	23.090	1.122	24.212
421	CB CRESTVIEW A	80.649	4.204	84.853
424	CB ISD	33.720	18.100	51.820
425	CB ISD E	13.578	4.885	18.463
426	CB ISD A	4.436	1.339	5.775

TOTAL FOR STORAGE FACILITIES

CAPITAL COST:	4662.900
O&M:	797.631
TOTAL:	5460.532

PIPELINES

ID	TITLE	PRESENT WORTH: CAPITAL COST	O&M	TOTAL
686	MUD 5F	4693.015	998.979	5691.993
687	MUD 1F	984.399	195.577	1179.975
690	MUD 1A	37566.994	7356.914	44923.909
702	MUD BENNINGTON 5H	393.612	70.809	464.421
719	SPRINGFIELD 1E2	166.152	29.889	196.040
721	KINGS LAKE 5F	37.181	6.687	43.868
722	VALLEY 5E	203.046	36.530	239.576
724	ELKHORN 5E	149.055	26.815	175.869
726	COUNCIL BLUFFS 5F	1157.004	228.964	1385.968
601	SPRINGFIELD E	736.205	154.798	891.003
602	BENNINGTON E	439.602	106.001	545.603
603	ELKHORN A	439.028	135.683	574.711
604	VALLEY E	260.840	133.777	394.617
605	GRETNA A&D	1402.503	269.822	1672.325
621	METRO OMAHA A	59413.216	28073.711	87486.927
625	COUNCIL BLUFFS	3335.634	3175.614	6511.248

TOTAL FOR PIPELINES

CAPITAL COST:	111377.486
O&M:	41000.570
TOTAL:	152378.053

GRAND TOTAL

CAPITAL COST:	186323.763
O&M:	82799.255
TOTAL:	269123.013

TREATMENT PLANTS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
041	SPRINGFIELD	1B2	2934.799	1077.139	4011.938
045	VALLEY	1B	2782.308	1101.334	3883.641
047	COUNCIL BLUFFS	1B	7268.031	7743.793	15011.824
067	PLATTE SOUTH	5B	3258.058	10528.117	13786.175
075	MISSOURI SOUTH	1B2	19680.112	9036.048	28716.160
SH1	FLORENCE SLUDGE HAND		6609.587	0.000	6609.587
SH2	PLATTE S SLUDGE HAND		2699.467	0.000	2699.467
SH3	C B SLUDGE HANDLING		1762.601	0.000	1762.601

TOTAL FOR TREATMENT PLANTS

CAPITAL COST:	46994.963
O&M:	29486.431
TOTAL:	76481.393

BOOSTER STATIONS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
165	MUD BEDFORD	5F	422.980	449.537	872.517
166	MUD MORMAN	5F	267.385	487.799	755.184
167	MUD POPPLETON	5F	564.550	484.547	1049.097
168	MUD WALNUT HILL	5F	664.518	816.020	1480.537
169	MUD TURNER	5F	1274.081	1764.547	3038.628
171	MUD CORNHUSKER	5B&C	51.662	111.167	162.829
172	MUD 78TH ST	5F	287.568	1167.395	1454.963
174	MUD HARRISON	7B	672.158	862.998	1535.156
178	MUD HARTMAN	5B	838.653	716.297	1554.950
186	MUD RAINWOOD	1B	1350.935	555.069	1906.005
198	MUD 132ND ST	7B	512.333	424.639	936.972
216	MUD I-80	1B2	804.554	448.197	1252.751
224	BENNINGTON	5B	276.543	151.654	428.197
228	GRETNA	5B	367.833	184.951	552.784
231	CB MT LINCOLN	5B	103.220	49.230	152.450
234	CB GLENDALE	5B	167.195	64.904	232.099
238	CB OAK ST	5B	91.572	67.045	158.617
242	CB ISD	5B	62.162	49.646	111.808

TOTAL FOR BOOSTER STATIONS

CAPITAL COST:	8779.902
O&M:	8855.642
TOTAL:	17635.544

STORAGE FACILITIES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
383	GRETNA B	138.366	36.812	175.178
386	SPRINGFIELD B	1172.331	29.863	1202.193
387	PAPILLION	1090.015	33.871	1123.886
388	OFFUTT	37.321	38.381	75.703
389	BELLEVUE	21.310	37.551	58.861
389	BELLEVUE 1	395.203	22.068	417.271
391	BENNINGTON-1 B	69.667	7.946	77.612
391	BENNINGTON B	1141.607	31.683	1173.290
393	ELKHORN-1 B	8.771	21.143	29.914
393	ELKHORN B	624.497	28.565	653.062
395	VALLEY B	598.729	28.447	627.176
396	WATERLOO	178.380	9.223	187.603
400	MUD WALNUT HILL	0.000	82.504	82.504
401	MUD FIELD CLUB	50.712	84.422	135.134
402	MUD 132ND ST	4.704	47.973	52.677
403	MUD 36TH & HARRISON	125.987	22.280	148.267
404	MUD NO. OMAHA	6.948	9.782	16.730
405	MUD RAINWOOD RD	244.172	31.280	275.452
406	MUD 132ND ST	138.956	24.597	163.553
411	MUD I-80 I&III	201.002	29.869	230.871
415	CB MT LINCOLN	2.084	40.300	42.384
416	CB GLENDALE	4.892	40.300	45.192
417	CB MEMORIAL PARK	21.074	18.993	40.067
418	CB SIMMS	21.074	18.993	40.067
419	CB GRAND AVE	169.838	9.188	179.026
422	CB CRESTVIEW B&C	50.432	2.846	53.277
424	CB ISO	33.720	18.100	51.820
427	CB ISO B	4.436	1.339	5.775

TOTAL FOR STORAGE FACILITIES

CAPITAL COST:	6556.228
O&M:	808.319
TOTAL:	7364.545

PIPELINES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
686	MUD 5F	4693.015	998.979	5691.993
687	MUD 1F	984.399	195.577	1179.975
691	MUD 1B	21726.951	4159.917	25886.868
703	MUD BENNINGTON 5B	1138.290	204.771	1343.061
711	MUD GRETNA 6B	1611.691	292.745	1904.436
720	SPRINGFIELD 1B2	325.527	58.560	384.086
721	KINGS LAKE 5F	37.181	6.687	43.868
723	VALLEY 5B	245.240	44.119	289.359
725	ELKHORN 5B	275.340	49.536	324.876
726	COUNCIL BLUFFS 5F	1157.004	228.964	1385.968
613	SPRINGFIELD B	3378.222	536.197	3914.419
614	GRETNA B	4226.506	703.940	4930.446
615	ELKHORN B	2454.104	429.080	2883.184
616	VALLEY B	601.945	170.323	772.268
617	BENNINGTON B	2538.790	413.237	2952.027
622	METRO OMAHA B	31863.168	22950.966	54814.134
626	COUNCIL BLUFFS	2509.567	2884.423	5393.990

TOTAL FOR PIPELINES

CAPITAL COST:	79766.940
O&M:	34328.021
TOTAL:	114094.958

GRAND TOTAL

CAPITAL COST:	142098.033
O&M:	73478.413
TOTAL:	215576.440

Scheme IC2

TREATMENT PLANTS

		--------------PRESENT WORTH--------------		
ID	TITLE	CAPITAL COST	O&M	TOTAL
040	SPRINGFIELD 1E2	895.500	284.750	1180.250
044	VALLEY 1E	1143.715	436.255	1579.969
048	COUNCIL BLUFFS 1C	6727.286	7572.457	14299.743
068	PLATTE SOUTH 5C	5198.218	11563.290	16761.508
076	MISSOURI SOUTH 1C2	28202.319	9899.854	38102.173
SH1	FLORENCE SLUDGE HAND	6609.587	0.000	6609.587
SH2	PLATTE S SLUDGE HAND	2699.467	0.000	2699.467
SH3	C B SLUDGE HANDLING	1762.601	0.000	1762.601

TOTAL FOR TREATMENT PLANTS

CAPITAL COST:	53238.693
O&M:	29756.606
TOTAL:	82995.298

BOOSTER STATIONS

		--------------PRESENT WORTH--------------		
ID	TITLE	CAPITAL COST	O&M	TOTAL
165	MUD BEDFORD 5F	422.980	449.537	872.517
166	MUD MORMAN 5F	267.385	487.799	755.184
167	MUD POPPLETON 5F	564.550	484.547	1049.097
168	MUD WALNUT HILL 5F	664.518	816.020	1480.537
169	MUD TURNER 5F	1274.081	1764.547	3038.628
171	MUD CORNHUSKER 5B&C	51.662	111.167	162.829
172	MUD 78TH ST 5F	287.568	1167.395	1454.963
175	MUD HARRISON 7C	672.158	1139.815	1811.973
179	MUD HARTMAN 5C	1086.817	993.146	2079.963
187	MUD RAINWOOD 1C	1350.935	423.001	1773.936
199	MUD 132ND ST 7C	512.333	485.506	997.839
206	MUD FORT ST 7C	59.816	16.711	76.528
217	MUD I-80 1C2	920.290	520.873	1441.163
223	BENNINGTON 5E	74.913	29.923	104.835
229	GRETNA 5C	156.833	73.755	230.587
232	CB MT LINCOLN 5C	103.220	63.099	166.319
235	GLENDALE 5C	177.762	75.233	252.995
239	CB OAK ST 5C	101.765	77.415	179.181
243	CB ISD 5C	87.041	54.551	141.592

TOTAL FOR BOOSTER STATIONS

CAPITAL COST:	8836.627
O&M:	9234.040
TOTAL:	18070.666

STORAGE FACILITIES

ID	TITLE	PRESENT WORTH		
		CAPITAL COST	O&M	TOTAL
384	GRETNA C	115.424	35.328	150.751
385	SPRINGFIELD	372.196	22.273	394.469
387	PAPILLION	1090.015	33.871	1123.886
388	OFFUTT	37.321	38.381	75.703
389	BELLEVUE	21.310	37.551	58.861
389	BELLEVUE 1	395.203	22.068	417.271
390	BENNINGTON-1	69.667	7.946	77.612
390	BENNINGTON	414.211	20.311	434.522
392	ELKHORN-1	.877	8.163	9.040
392	ELKHORN	281.220	15.417	296.637
394	VALLEY	290.274	16.187	306.461
396	WATERLOO	178.380	9.223	187.603
400	MUD WALNUT HILL	0.000	82.504	82.504
401	MUD FIELD CLUB	50.712	84.422	135.134
402	MUD 132ND ST	4.704	47.973	52.677
403	MUD 36TH & HARRISON	125.987	22.280	148.267
404	MUD NO. OMAHA	6.948	9.782	16.730
405	MUD RAINWOOD RD	244.172	31.280	275.452
406	MUD 132ND ST	138.956	24.597	163.553
408	MUD 132ND ST C	4.472	2.772	7.245
410	MUD FORT ST E	213.066	28.309	241.375
411	MUD I-80 I&III	201.002	29.869	230.871
412	MUD I-80 I&III E	21.995	9.131	31.126
415	CB MT LINCOLN	2.084	40.300	42.384
416	CB GLENDALE	4.892	40.300	45.192
417	CB MEMORIAL PARK	21.074	18.993	40.067
418	CB SIMMS	21.074	18.993	40.067
419	CB GRAND AVE	169.838	9.188	179.026
420	CB GRAND AVE E	23.090	1.122	24.212
422	CB CRESTVIEW B&C	50.432	2.846	53.277
424	CB ISO	33.720	18.100	51.820
425	CB ISO E	13.578	4.885	18.463
428	CB ISO C	4.272	1.122	5.394

TOTAL FOR STORAGE FACILITIES

CAPITAL COST:	4622.166
O&M:	795.487
TOTAL:	5417.652

PIPELINES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
686	MUD 5F	4693.015	998.979	5691.993
687	MUD 1F	984.399	195.577	1179.975
692	MUD 1C	23567.265	4563.566	28130.831
704	MUD BENNINGTON 5C	423.319	76.153	499.472
712	MUD GRETNA 6C	789.857	143.473	933.330
719	SPRINGFIELD 1E2	166.152	29.889	196.040
721	KINGS LAKE 5F	37.181	6.687	43.868
722	VALLEY 5E	203.046	36.530	239.576
724	ELKHORN 5E	149.055	26.815	175.869
726	COUNCIL BLUFFS 5F	1157.004	228.964	1385.968
600	GRETNA C	1622.727	330.301	1953.028
601	SPRINGFIELD E	736.205	154.798	891.003
602	BENNINGTON E	439.602	106.001	545.603
604	VALLEY E	260.840	133.777	394.617
606	ELKHORN C	439.028	135.683	574.711
623	METRO OMAHA C	46940.871	24708.756	71649.627
627	COUNCIL BLUFFS	2594.423	2795.186	5389.609

TOTAL FOR PIPELINES

CAPITAL COST: 85203.989
O&M: 34671.135
TOTAL: 119875.120

GRAND TOTAL

CAPITAL COST: 151901.475
O&M: 74457.268
TOTAL: 226358.736

Scheme ID2

TREATMENT PLANTS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
040	SPRINGFIELD	1E2	895.500	284.750	1180.250
044	VALLEY	1E	1143.715	436.255	1579.969
049	COUNCIL BLUFFS	1D	7104.551	7634.020	14738.571
069	PLATTE SOUTH	5D	5198.218	11860.721	17058.938
077	MISSOURI SOUTH	1D2	35192.084	11584.365	46776.449
SH1	FLORENCE SLUDGE HAND		6609.587	0.000	6609.587
SH2	PLATTE S SLUDGE HAND		2699.467	0.000	2699.467
SH3	C B SLUDGE HANDLING		1762.601	0.000	1762.601

TOTAL FOR TREATMENT PLANTS

CAPITAL COST:	60605.723
O&M:	31800.111
TOTAL:	92405.832

BOOSTER STATIONS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
165	MUD BEDFORD	5F	422.980	449.537	872.517
166	MUD MORMAN	5F	267.385	487.799	755.184
167	MUD POPPLETON	5F	564.550	484.547	1049.097
168	MUD WALNUT HILL	5F	664.518	816.020	1480.537
169	MUD TURNER	5F	1274.081	1764.547	3038.628
170	MUD CORNHUSKER	5A&D	51.662	103.180	154.842
172	MUD 78TH ST	5F	287.568	1167.395	1454.963
176	MUD HARRISON	7D	672.158	854.615	1526.773
180	MUD HARTMAN	5D	721.403	707.948	1429.351
188	MUD RAINWOOD	1D	1350.935	488.336	1839.272
200	MUD 132ND ST	7D	554.902	492.826	1047.728
207	MUD FORT ST	7D	340.037	152.835	492.872
218	MUD I-80	101	1301.473	965.740	2267.212
223	BENNINGTON	5E	74.913	29.923	104.835
227	GRETNA	5A&D	302.643	82.072	384.715
230	CB MT LINCOLN	5A-D	103.220	49.230	152.450
236	GLENDALE	5D	181.495	71.075	252.569
240	CB OAK ST	5D	105.498	85.615	191.113
244	CB ISD	5D	106.798	67.557	174.355

TOTAL FOR BOOSTER STATIONS

CAPITAL COST:	9348.219
O&M:	9320.797
TOTAL:	18669.013

STORAGE FACILITIES

ID	TITLE	CAPITAL COST	O&M	TOTAL
		PRESENT WORTH		
382	GRETNA A&D	119.814	35.626	155.441
385	SPRINGFIELD	372.196	22.273	394.469
387	PAPILLION	1090.015	33.871	1123.886
388	OFFUTT	37.321	38.381	75.703
389	BELLEVUE	21.310	37.551	58.861
389	BELLEVUE 1	395.203	22.068	417.271
390	BENNINGTON-1	69.667	7.946	77.612
390	BENNINGTON	414.211	20.311	434.522
392	ELKHORN-1	.877	8.163	9.040
392	ELKHORN	281.220	15.417	296.637
394	VALLEY	290.274	16.187	306.461
396	WATERLOO	178.380	9.223	187.603
400	MUD WALNUT HILL	0.000	82.504	82.504
401	MUD FIELD CLUB	50.712	84.422	135.134
402	MUD 132ND ST	4.704	47.973	52.677
403	MUD 36TH & HARRISON	125.987	22.280	148.267
404	MUD NO. OMAHA	6.948	9.782	16.730
405	MUD RAINWOOD RD	244.172	31.280	275.452
406	MUD 132ND ST	138.956	24.597	163.553
409	MUD 132ND ST D	7.454	2.908	10.361
410	MUD FORT ST E	213.066	28.309	241.375
411	MUD I-80 I&III	201.002	29.869	230.871
412	MUD I-80 I&III E	21.995	9.131	31.126
415	CB MT LINCOLN	2.084	40.300	42.384
416	CB GLENDALE	4.892	40.300	45.192
417	CB MEMORIAL PARK	21.074	18.993	40.067
418	CB SIMMS	21.074	18.993	40.067
419	CB GRAND AVE	169.838	9.188	179.026
420	CB GRAND AVE E	23.090	1.122	24.212
423	CB CRESTVIEW D	93.163	4.885	98.048
424	CB ISD	33.720	18.100	51.820
425	CB ISD E	13.578	4.885	18.463
429	CB ISD D	4.601	1.555	6.157

TOTAL FOR STORAGE FACILITIES

CAPITAL COST:	4672.598
O&M:	798.393
TOTAL:	5470.992

PIPELINES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
686	MUD 5F	4693.015	998.979	5691.993
687	MUD 1F	984.399	195.577	1179.975
693	MUD 1D	37928.755	7443.595	45372.350
702	MUD BENNINGTON 5H	393.612	70.809	464.421
719	SPRINGFIELD 1E2	166.152	29.889	196.040
721	KINGS LAKE 5F	37.181	6.687	43.868
722	VALLEY 5E	203.046	36.530	239.576
724	ELKHORN 5E	149.055	26.815	175.869
726	COUNCIL BLUFFS 5F	1157.004	228.964	1385.968
601	SPRINGFIELD E	736.205	154.798	891.003
602	BENNINGTON E	439.602	106.001	545.603
604	VALLEY E	260.840	133.777	394.617
605	GRETNA A&D	1402.503	269.822	1672.325
607	ELKHORN D	402.543	118.196	520.739
624	METRO OMAHA D	56393.485	27305.619	83699.104
628	COUNCIL BLUFFS	3375.799	3134.328	6510.127

TOTAL FOR PIPELINES

CAPITAL COST:	108723.196
O&M:	40260.386
TOTAL:	148983.578

GRAND TOTAL

CAPITAL COST:	183349.736
O&M:	82179.687
TOTAL:	265529.415

Scheme IIA

TREATMENT PLANTS

ID	TITLE		PRESENT WORTH CAPITAL COST	PRESENT WORTH O&M	PRESENT WORTH TOTAL
050	COUNCIL BLUFFS	2A	9070.954	9009.019	18079.973
058	FLORENCE	2A	33674.765	37515.919	71190.684
066	PLATTE SOUTH	5A	5755.784	11974.126	17729.910
082	PLATTE WEST	2A	34978.206	9729.317	44707.524
SH1	FLORENCE SLUDGE HAND		6609.587	0.000	6609.587
SH2	PLATTE S SLUDGE HAND		2699.467	0.000	2699.467
SH3	C B SLUDGE HANDLING		1762.601	0.000	1762.601

TOTAL FOR TREATMENT PLANTS

CAPITAL COST:	94551.364
O&M:	68228.381
TOTAL:	162779.746

BOOSTER STATIONS

ID	TITLE		PRESENT WORTH CAPITAL COST	PRESENT WORTH O&M	PRESENT WORTH TOTAL
165	MUD BEDFORD	5F	422.980	449.537	872.517
166	MUD MORMAN	5F	267.385	487.799	755.184
167	MUD POPPLETON	5F	564.550	484.547	1049.097
168	MUD WALNUT HILL	5F	664.518	816.020	1480.537
169	MUD TURNER	5F	1274.081	1764.547	3038.628
170	MUD CORNHUSKER	5A&D	51.662	103.180	154.842
172	MUD 78TH ST	5F	287.568	1167.395	1454.963
177	MUD HARTMAN	5A	747.820	702.713	1450.533
181	MUD HARRISON	2A	374.976	597.645	972.621
189	MUD RAINWOOD	2A	1350.935	550.608	1901.544
201	MUD 132ND ST	2A	618.003	640.74[illegible]	1258.748
208	MUD FORT ST	2A	569.801	305.657	875.458
223	BENNINGTON	5E	74.913	29.923	104.835
225	SPRINGFIELD	2E	83.998	33.101	117.099
227	GRETNA 5A&D		302.643	82.072	384.715
230	CB MT LINCOLN	5A-D	103.220	49.230	152.450
233	CB GLENDALE	5A	178.882	78.835	257.717
237	CB OAK ST	5A	103.632	81.043	184.674
241	CB ISD	5A	103.349	63.972	167.321

TOTAL FOR BOOSTER STATIONS

CAPITAL COST:	8144.916
O&M:	8439.569
TOTAL:	16633.483

STORAGE FACILITIES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
382	GRETNA A&D	119.814	35.626	155.441
385	SPRINGFIELD	372.196	22.273	394.469
387	PAPILLION	1090.015	33.871	1123.886
388	OFFUTT	37.321	38.381	75.703
389	BELLEVUE	21.310	37.551	58.861
389	BELLEVUE 1	395.203	22.068	417.271
390	BENNINGTON-1	69.667	7.946	77.612
390	BENNINGTON	414.211	20.311	434.522
392	ELKHORN-1	.877	8.163	9.040
392	ELKHORN	281.220	15.417	296.637
394	VALLEY	290.274	16.187	306.461
396	WATERLOO	178.380	9.223	187.603
400	MUD WALNUT HILL	0.000	82.504	82.504
401	MUD FIELD CLUB	50.712	84.422	135.134
402	MUD 132ND ST	4.704	47.973	52.677
403	MUD 36TH & HARRISON	125.987	22.280	148.267
404	MUD NO. OMAHA	6.948	9.782	16.730
405	MUD RAINWOOD RD	244.172	31.280	275.452
406	MUD 132ND ST	138.956	24.597	163.553
407	MUD 132ND ST A	10.435	3.043	13.478
410	MUD FORT ST E	213.066	28.309	241.375
411	MUD I-80 I&III	201.002	29.869	230.871
412	MUD I-80 I&III E	21.995	9.131	31.126
413	MUD 78TH HARRISON II	201.002	29.869	230.871
414	MUD 78&HARRISON IIE	21.995	9.131	31.126
415	CB MT LINCOLN	2.084	40.300	42.384
416	CB GLENDALE	4.892	40.300	45.192
417	CB MEMORIAL PARK	21.074	18.993	40.067
418	CB SIMMS	21.074	18.993	40.067
419	CB GRAND AVE	169.838	9.188	179.026
420	CB GRAND AVE E	23.090	1.122	24.212
421	CB CRESTVIEW A	80.649	4.204	84.853
424	CB ISD	33.720	18.100	51.820
425	CB ISD E	13.578	4.885	18.463
426	CB ISD A	4.436	1.339	5.775

TOTAL FOR STORAGE FACILITIES

CAPITAL COST:	4885.897
O&M:	836.631
TOTAL:	5722.529

PIPELINES

ID	TITLE	CAPITAL COST	O&M	TOTAL
		--------------PRESENT WORTH--------------		
686	MUD 5F	4693.015	998.979	5691.993
688	MUD 2F	2106.019	434.321	2540.340
694	MUD 2A	29381.366	5725.339	35106.704
702	MUD BENNINGTON 5H	393.612	70.809	464.421
709	MUD E-V-W 2E	525.938	94.615	620.554
717	MUD SPRINGFIELD 8EO	325.771	58.606	384.377
721	KINGS LAKE 5F	37.181	6.687	43.868
722	VALLEY 5E	203.046	36.530	239.576
724	ELKHORN 5E	149.055	26.815	175.869
726	COUNCIL BLUFFS 5F	1157.004	228.964	1385.968
601	SPRINGFIELD E	736.205	154.798	891.003
602	BENNINGTON E	439.602	106.001	545.603
603	ELKHORN A	439.028	135.683	574.711
604	VALLEY E	260.840	133.777	394.617
605	GRETNA A&D	1402.503	269.822	1672.325
621	METRO OMAHA A	59413.216	28073.711	87486.927
625	COUNCIL BLUFFS	3335.634	3175.614	6511.248

TOTAL FOR PIPELINES

CAPITAL COST:	104999.035
O&M:	39731.071
TOTAL:	144730.10[illegible]

GRAND TOTAL

CAPITAL COST:	212581.212
O&M:	117284.652
TOTAL:	329865.862

AD-A041 937 ARMY ENGINEER DISTRICT OMAHA NEBR F/G 8/6
WATER AND RELATED LAND RESOURCES MANAGEMENT STUDY. VOLUME V. SU--ETC(U)
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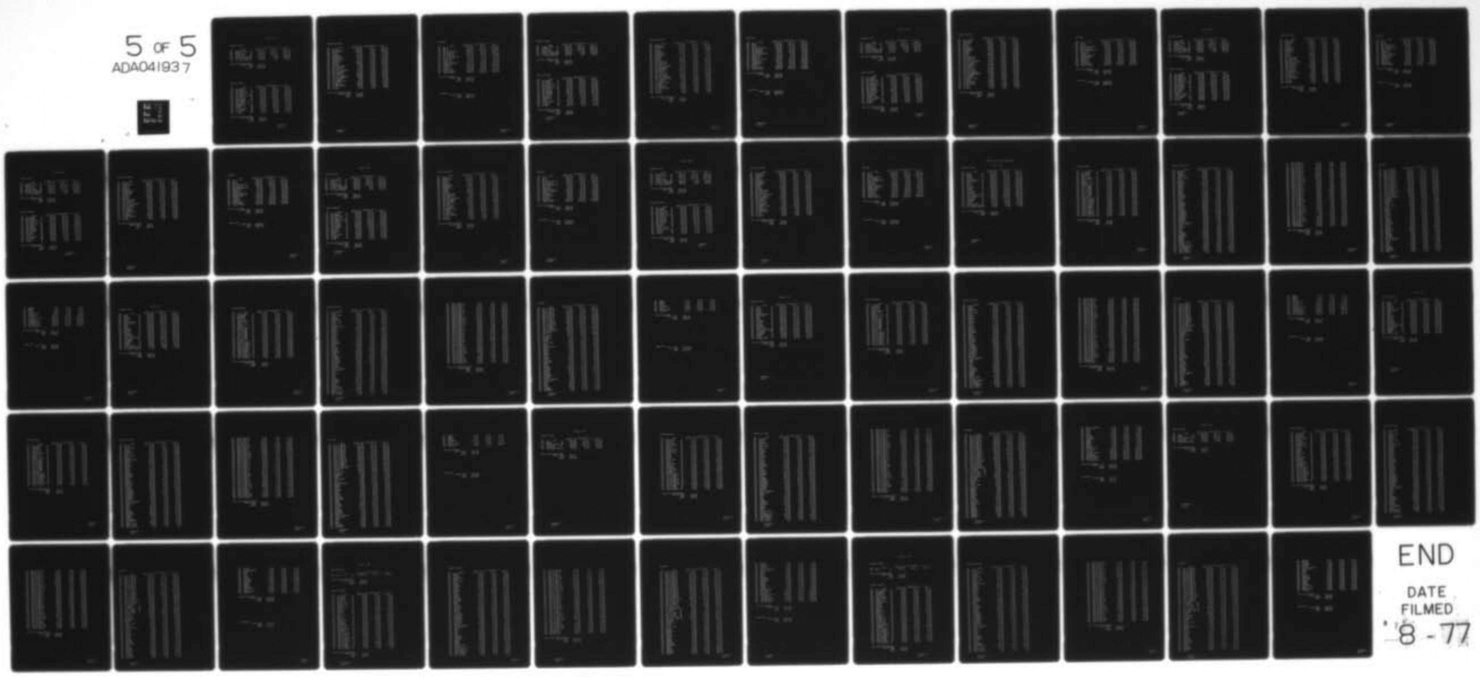

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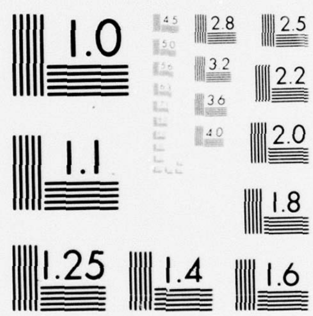

MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

Scheme IIB

TREATMENT PLANTS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
051	COUNCIL BLUFFS	2B	9635.362	9276.837	18912.199
059	FLORENCE	2B	35217.423	37211.780	72429.203
067	PLATTE SOUTH	5B	3258.058	10528.117	13786.175
083	PLATTE WEST	2B	24761.385	8803.521	33564.905
SH1	FLORENCE SLUDGE HAND		6609.587	0.000	6609.587
SH2	PLATTE S SLUDGE HAND		2699.467	0.000	2699.467
SH3	C B SLUDGE HANDLING		1762.601	0.000	1762.601

TOTAL FOR TREATMENT PLANTS

CAPITAL COST:	83943.883
O&M:	65820.255
TOTAL:	149764.137

BOOSTER STATIONS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
165	MUD BEDFORD	5F	422.980	449.537	872.517
166	MUD MORMAN	5F	267.385	487.799	755.184
167	MUD POPPLETON	5F	564.550	484.547	1049.097
168	MUD WALNUT HILL	5F	664.518	816.020	1480.537
169	MUD TURNER	5F	1274.081	1764.547	3038.628
171	MUD CORNHUSKER	5B&C	51.662	111.167	162.829
172	MUD 78TH ST	5F	287.568	1167.395	1454.963
178	MUD HARTMAN	5B	838.653	716.297	1554.950
182	MUD HARRISON	2B	374.976	611.264	986.240
190	MUD RAINWOOD	2B	1350.935	614.549	1965.484
202	MUD 132ND ST 2B		618.003	676.373	1294.376
224	BENNINGTON	5B	276.543	151.654	428.197
226	SPRINGFIELD	2B	247.110	145.563	392.673
228	GRETNA	5B	367.833	184.951	552.784
231	CB MT LINCOLN	5B	103.220	49.230	152.450
234	CB GLENDALE	5B	167.195	64.904	232.099
238	CB OAK ST	5B	91.572	67.045	158.617
242	CB ISD	5B	62.162	49.646	111.808

TOTAL FOR BOOSTER STATIONS

CAPITAL COST:	8030.946
O&M:	8612.488
TOTAL:	16643.433

STORAGE FACILITIES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
383	GRETNA B	138.366	36.812	175.178
386	SPRINGFIELD B	1172.331	29.863	1202.193
387	PAPILLION	1090.015	33.871	1123.886
388	OFFUTT	37.321	38.381	75.703
389	BELLEVUE	21.310	37.551	58.861
389	BELLEVUE 1	395.203	22.068	417.271
391	BENNINGTON-1 B	69.667	7.946	77.612
391	BENNINGTON B	1141.607	31.683	1173.290
393	ELKHORN-1 B	8.771	21.143	29.914
393	ELKHORN B	624.497	28.565	653.062
395	VALLEY B	598.729	28.447	627.176
396	WATERLOO	178.380	9.223	187.603
400	MUD WALNUT HILL	0.000	82.504	82.504
401	MUD FIELD CLUB	50.712	84.422	135.134
402	MUD 132ND ST	4.704	47.973	52.677
403	MUD 36TH & HARRISON	125.987	22.280	148.267
404	MUD NO. OMAHA	6.948	9.782	16.730
405	MUD RAINWOOD RD	244.172	31.280	275.452
406	MUD 132ND ST	138.956	24.597	163.553
411	MUD I-80 I&III	201.002	29.869	230.871
413	MUD 78TH HARRISON II	201.002	29.869	230.871
415	CB MT LINCOLN	2.084	40.300	42.384
416	CB GLENDALE	4.892	40.300	45.192
417	CB MEMORIAL PARK	21.074	18.993	40.067
418	CB SIMMS	21.074	18.993	40.067
419	CB GRAND AVE	169.838	9.188	179.026
422	CB CRESTVIEW B&C	50.432	2.846	53.277
424	CB ISD	33.720	18.100	51.820
427	CB ISD B	4.436	1.339	5.775

TOTAL FOR STORAGE FACILITIES

CAPITAL COST:	6757.230
O&M:	838.188
TOTAL:	7595.416

PIPELINES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
686	MUD 5F	4693.015	998.979	5691.993
688	MUD 2F	2106.019	434.321	2540.340
695	MUD 2B	18650.520	3668.768	22319.288
703	MUD BENNINGTON 5B	1138.290	204.771	1343.061
710	MUD E-V-W 2B	850.436	152.991	1003.427
711	MUD GRETNA 6B	1611.691	292.745	1904.436
713	MUD GRETNA 2B	1854.965	336.935	2191.900
718	MUD SPRINGFIELD 8B0	764.523	137.536	902.059
721	KINGS LAKE 5F	37.181	6.687	43.868
723	VALLEY 5B	245.240	44.119	289.359
725	ELKHORN 5B	275.340	49.536	324.876
726	COUNCIL BLUFFS 5F	1157.004	228.964	1385.968
613	SPRINGFIELD B	3378.222	536.197	3914.419
614	GRETNA B	4226.506	703.940	4930.446
615	ELKHORN B	2454.104	429.080	2883.184
616	VALLEY B	601.945	170.323	772.268
617	BENNINGTON B	2538.790	413.237	2952.027
622	METRO OMAHA B	31863.168	22950.966	54814.134
626	COUNCIL BLUFFS	2509.567	2884.423	5393.990

TOTAL FOR PIPELINES

CAPITAL COST:	80956.526
O&M:	34644.518
TOTAL:	115601.043

GRAND TOTAL

CAPITAL COST:	179688.585
O&M:	109915.449
TOTAL:	289604.029

Scheme IIC

TREATMENT PLANTS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
052	COUNCIL BLUFFS	2C	9161.021	9105.501	18266.522
060	FLORENCE	2C	38014.706	39405.935	77420.641
068	PLATTE SOUTH	5C	5198.218	11563.290	16761.508
084	PLATTE WEST	2C	28159.687	8566.087	36725.774
SH1	FLORENCE SLUDGE HAND		6609.587	0.000	6609.587
SH2	PLATTE S SLUDGE HAND		2699.467	0.000	2699.467
SH3	C B SLUDGE HANDLING		1762.601	0.000	1762.601

TOTAL FOR TREATMENT PLANTS

CAPITAL COST:	91605.287
O&M:	68640.813
TOTAL:	160246.100

BOOSTER STATIONS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
165	MUD BEDFORD	5F	422.980	449.537	872.517
166	MUD NORMAN	5F	267.385	487.799	755.184
167	MUD POPPLETON	5F	564.550	484.547	1049.097
168	MUD WALNUT HILL	5F	664.518	816.020	1480.537
169	MUD TURNER	5F	1274.081	1764.547	3038.628
171	MUD CORNHUSKER	5B&C	51.662	111.167	162.829
172	MUD 78TH ST	5F	287.568	1167.395	1454.963
179	MUD HARTMAN	5C	1086.817	993.146	2079.963
183	MUD HARRISON	2C	374.976	888.080	1263.057
191	MUD RAINWOOD	2C	1350.935	439.457	1790.392
203	MUD 132ND ST	2C	976.464	684.594	1661.058
209	MUD FORT ST	2C	95.404	47.479	142.883
223	BENNINGTON	5E	74.913	29.923	104.835
225	SPRINGFIELD	2E	83.998	33.101	117.099
229	GRETNA	5C	156.833	73.755	230.587
232	CB MT LINCOLN	5C	103.220	63.099	166.319
235	GLENDALE	5C	177.762	75.233	252.995
239	CB OAK ST	5C	101.765	77.415	179.181
243	CB ISD	5C	87.041	54.551	141.592

TOTAL FOR BOOSTER STATIONS

CAPITAL COST:	8202.872
O&M:	8740.845
TOTAL:	16943.716

STORAGE FACILITIES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
384	GRETNA C	115.424	35.328	150.751
385	SPRINGFIELD	372.196	22.273	394.469
387	PAPILLION	1090.015	33.871	1123.886
388	OFFUTT	37.321	38.381	75.703
389	BELLEVUE	21.310	37.551	58.861
389	BELLEVUE 1	395.203	22.068	417.271
390	BENNINGTON-1	69.667	7.946	77.612
390	BENNINGTON	414.211	20.311	434.522
392	ELKHORN-1	.877	8.163	9.040
392	ELKHORN	281.220	15.417	296.637
394	VALLEY	290.274	16.187	306.461
396	WATERLOO	178.380	9.223	187.603
400	MUD WALNUT HILL	0.000	82.504	82.504
401	MUD FIELD CLUB	50.712	84.422	135.134
402	MUD 132ND ST	4.704	47.973	52.677
403	MUD 36TH & HARRISON	125.987	22.280	148.267
404	MUD NO. OMAHA	6.948	9.782	16.730
405	MUD RAINWOOD RD	244.172	31.280	275.452
406	MUD 132ND ST	138.956	24.597	163.553
408	MUD 132ND ST C	4.472	2.772	7.245
410	MUD FORT ST E	213.066	28.309	241.375
411	MUD I-80 I&III	201.002	29.869	230.871
412	MUD I-80 I&III E	21.995	9.131	31.126
413	MUD 78TH HARRISON II	201.002	29.869	230.871
414	MUD 78&HARRISON IIE	21.995	9.131	31.126
415	CB MT LINCOLN	2.084	40.300	42.384
416	CB GLENDALE	4.892	40.300	45.192
417	CB MEMORIAL PARK	21.074	18.993	40.067
418	CB SIMMS	21.074	18.993	40.067
419	CB GRAND AVE	169.838	9.188	179.026
420	CB GRAND AVE E	23.090	1.122	24.212
422	CB CRESTVIEW B&C	50.432	2.846	53.277
424	CB ISD	33.720	18.100	51.820
425	CB ISD E	13.578	4.885	18.463
428	CB ISD C	4.272	1.122	5.394

TOTAL FOR STORAGE FACILITIES

CAPITAL COST:	4845.163
O&M:	834.487
TOTAL:	5679.649

PIPELINES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
686	MUD 5F	4693.015	998.979	5691.993
688	MUD 2F	2106.019	434.321	2540.340
696	MUD 2C	22709.081	4404.715	27113.796
704	MUD BENNINGTON 5C	423.319	76.153	499.472
709	MUD E-V-W 2E	525.938	94.615	620.554
712	MUD GRETNA 6C	789.857	143.473	933.330
714	MUD GRETNA 2C	789.857	143.473	933.330
717	MUD SPRINGFIELD 8E0	325.771	58.606	384.377
721	KINGS LAKE 5F	37.181	6.687	43.868
722	VALLEY 5E	203.046	36.530	239.576
724	ELKHORN 5E	149.055	26.815	175.869
726	COUNCIL BLUFFS 5F	1157.004	228.964	1385.968
600	GRETNA C	1622.727	330.301	1953.028
601	SPRINGFIELD E	736.205	154.798	891.003
602	BENNINGTON E	439.602	106.001	545.603
604	VALLEY E	260.840	133.777	394.617
606	ELKHORN C	439.028	135.683	574.711
623	METRO OMAHA C	46940.871	24708.756	71649.627
627	COUNCIL BLUFFS	2594.423	2795.186	5389.609

TOTAL FOR PIPELINES

CAPITAL COST:	86942.839
O&M:	35017.833
TOTAL:	121960.671

GRAND TOTAL

CAPITAL COST:	191596.161
O&M:	113233.978
TOTAL:	304830.136

TREATMENT PLANTS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
053	COUNCIL BLUFFS	2D	9538.286	9167.064	18705.350
061	FLORENCE	2D	32683.689	37443.111	70126.800
069	PLATTE SOUTH	5D	5198.218	11860.721	17058.938
085	PLATTE WEST	2D	35385.245	9933.945	45319.190
SH1	FLORENCE SLUDGE HAND		6609.587	0.000	6609.587
SH2	PLATTE S SLUDGE HAND		2699.467	0.000	2699.467
SH3	C B SLUDGE HANDLING		1762.601	0.000	1762.601

TOTAL FOR TREATMENT PLANTS

CAPITAL COST:	93877.093
O&M:	68404.841
TOTAL:	162281.933

BOOSTER STATIONS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
165	MUD BEDFORD	5F	422.980	449.537	872.517
166	MUD MORMAN	5F	267.385	487.799	755.184
167	MUD POPPLETON	5F	564.550	484.547	1049.097
168	MUD WALNUT HILL	5F	664.518	816.020	1480.537
169	MUD TURNER	5F	1274.081	1764.547	3038.628
170	MUD CORNHUSKER	5A&D	51.662	103.180	154.842
172	MUD 78TH ST	5F	287.568	1167.395	1454.963
180	MUD HARTMAN	5D	721.403	707.948	1429.351
184	MUD HARRISON	2D	374.976	602.955	977.931
192	MUD RAINWOOD	2D	1350.935	504.791	1855.727
204	MUD 132ND ST	2D	618.003	629.974	1247.977
210	MUD FORT ST	2D	538.502	247.391	785.893
223	BENNINGTON	5E	74.913	29.923	104.835
225	SPRINGFIELD	2E	83.998	33.101	117.099
227	GRETNA 5A&D		302.643	82.072	384.715
230	CB MT LINCOLN	5A-D	103.220	49.230	152.450
236	GLENDALE	5D	181.495	71.075	252.569
240	CB OAK ST	5D	105.498	85.615	191.113
244	CB ISD	5D	106.798	67.557	174.355

TOTAL FOR BOOSTER STATIONS

CAPITAL COST:	8095.128
O&M:	8384.657
TOTAL:	16479.783

STORAGE FACILITIES

ID	TITLE	--------------PRESENT WORTH-------------- CAPITAL COST	O&M	TOTAL
382	GRETNA A&D	119.814	35.626	155.441
385	SPRINGFIELD	372.196	22.273	394.469
387	PAPILLION	1090.015	33.871	1123.886
388	OFFUTT	37.321	38.381	75.703
389	BELLEVUE	21.310	37.551	58.861
389	BELLEVUE 1	395.203	22.068	417.271
390	BENNINGTON-1	69.667	7.946	77.612
390	BENNINGTON	414.211	20.311	434.522
392	ELKHORN-1	.877	8.163	9.040
392	ELKHORN	281.220	15.417	296.637
394	VALLEY	290.274	16.187	306.461
396	WATERLOO	178.380	9.223	187.603
400	MUD WALNUT HILL	0.000	82.504	82.504
401	MUD FIELD CLUB	50.712	84.422	135.134
402	MUD 132ND ST	4.704	47.973	52.677
403	MUD 36TH & HARRISON	125.987	22.280	148.267
404	MUD NO. OMAHA	6.948	9.782	16.730
405	MUD RAINWOOD RD	244.172	31.280	275.452
406	MUD 132ND ST	138.956	24.597	163.553
409	MUD 132ND ST D	7.454	2.908	10.361
410	MUD FORT ST E	213.066	28.309	241.375
411	MUD I-80 I&III	201.002	29.869	230.871
412	MUD I-80 I&III E	21.995	9.131	31.126
413	MUD 78TH HARRISON II	201.002	29.869	230.871
414	MUD 78&HARRISON IIE	21.995	9.131	31.126
415	CB MT LINCOLN	2.084	40.300	42.384
416	CB GLENDALE	4.892	40.300	45.192
417	CB MEMORIAL PARK	21.074	18.993	40.067
418	CB SIMMS	21.074	18.993	40.067
419	CB GRAND AVE	169.838	9.188	179.026
420	CB GRAND AVE E	23.090	1.122	24.212
423	CB CRESTVIEW D	93.163	4.885	98.048
424	CB ISD	33.720	18.100	51.820
425	CB ISD E	13.578	4.885	18.463
429	CB ISD D	4.601	1.555	6.157

TOTAL FOR STORAGE FACILITIES

CAPITAL COST:	4895.595
O&M:	837.393
TOTAL:	5732.989

PIPELINES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
686	MUD 5F	4693.015	998.979	5691.993
688	MUD 2F	2106.019	434.321	2540.340
697	MUD 2D	29869.319	5862.700	35732.019
702	MUD BENNINGTON 5H	393.612	70.809	464.421
709	MUD E-V-W 2E	525.938	94.615	620.554
717	MUD SPRINGFIELD 8ED	325.771	58.606	384.377
721	KINGS LAKE 5F	37.181	6.687	43.868
722	VALLEY 5E	203.046	36.530	239.576
724	ELKHORN 5E	149.055	26.815	175.869
726	COUNCIL BLUFFS 5F	1157.004	228.964	1385.968
601	SPRINGFIELD E	736.205	154.798	891.003
602	BENNINGTON E	439.602	106.001	545.603
604	VALLEY E	260.840	133.777	394.617
605	GRETNA A&D	1402.503	269.822	1672.325
607	ELKHORN D	402.543	118.196	520.739
624	METRO OMAHA D	56393.485	27305.619	83699.104
628	COUNCIL BLUFFS	3375.799	3134.328	6510.127

TOTAL FOR PIPELINES

CAPITAL COST:	102470.937
O&M:	39041.567
TOTAL:	141512.503

GRAND TOTAL

CAPITAL COST:	209338.753
O&M:	116668.458
TOTAL:	326007.208

Scheme IIIA

TREATMENT PLANTS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
042	SPRINGFIELD	3E	2550.511	1060.959	3611.470
054	COUNCIL BLUFFS	3A	8859.805	8941.050	17800.855
062	FLORENCE	3A	33873.226	37596.004	71469.230
066	PLATTE SOUTH	5A	5755.784	11974.126	17729.910
078	MISSOURI SOUTH	3A	37663.771	12526.164	50189.935
SH1	FLORENCE SLUDGE HAND		6609.587	0.000	6609.587
SH2	PLATTE S SLUDGE HAND		2699.467	0.000	2699.467
SH3	C B SLUDGE HANDLING		1762.601	0.000	1762.601

TOTAL FOR TREATMENT PLANTS

CAPITAL COST:	99774.752
O&M:	72098.303
TOTAL:	171873.055

BOOSTER STATIONS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
165	MUD BEDFORD	5F	422.980	449.537	872.517
166	MUD MORMAN	5F	267.385	487.799	755.184
167	MUD POPPLETON	5F	564.550	484.547	1049.097
168	MUD WALNUT HILL	5F	664.518	816.020	1480.537
169	MUD TURNER	5F	1274.081	1764.547	3038.628
170	MUD CORNHUSKER	5A&D	51.662	103.180	154.842
172	MUD 78TH ST	5F	287.568	1167.395	1454.963
173	MUD HARRISON	7A	672.158	849.380	1521.538
177	MUD HARTMAN	5A	747.820	702.713	1450.533
193	MUD RAINWOOD	3A	1350.935	577.251	1928.187
197	MUD 132ND ST	7A	586.704	526.159	1112.863
205	MUD FORT ST	7A	538.502	188.539	727.041
219	MUD I-80	3A	1327.890	944.644	2272.535
223	BENNINGTON	5E	74.913	29.923	104.835
227	GRETNA 5A&D		302.643	82.072	384.715
230	CB MT LINCOLN	5A-D	103.220	49.230	152.450
233	CB GLENDALE	5A	178.882	78.835	257.717
237	CB OAK ST	5A	103.632	81.043	184.674
241	CB ISO	5A	103.349	63.972	167.321

TOTAL FOR BOOSTER STATIONS

CAPITAL COST:	9623.392
O&M:	9446.786
TOTAL:	19070.177

STORAGE FACILITIES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
382	GRETNA A&D	119.814	35.626	155.441
385	SPRINGFIELD	372.196	22.273	394.469
387	PAPILLION	1090.015	33.871	1123.886
388	OFFUTT	37.321	38.381	75.703
389	BELLEVUE	21.310	37.551	58.861
389	BELLEVUE 1	395.203	22.068	417.271
390	BENNINGTON-1	69.667	7.946	77.612
390	BENNINGTON	414.211	20.311	434.522
392	ELKHORN-1	.877	8.163	9.040
392	ELKHORN	281.220	15.417	296.637
394	VALLEY	290.274	16.187	306.461
396	WATERLOO	178.380	9.223	187.603
400	MUD WALNUT HILL	0.000	82.504	82.504
401	MUD FIELD CLUB	50.712	84.422	135.134
402	MUD 132ND ST	4.704	47.973	52.677
403	MUD 36TH & HARRISON	125.987	22.280	148.267
404	MUD NO. OMAHA	6.948	9.782	16.730
405	MUD RAINWOOD RD	244.172	31.280	275.452
406	MUD 132ND ST	138.956	24.597	163.553
407	MUD 132ND ST A	10.435	3.043	13.478
410	MUD FORT ST E	213.066	28.309	241.375
415	CB MT LINCOLN	2.084	40.300	42.384
416	CB GLENDALE	4.892	40.300	45.192
417	CB MEMORIAL PARK	21.074	18.993	40.067
418	CB SIMMS	21.074	18.993	40.067
419	CB GRAND AVE	169.838	9.188	179.026
420	CB GRAND AVE E	23.090	1.122	24.212
421	CB CRESTVIEW A	80.649	4.204	84.853
424	CB ISD	33.720	18.100	51.820
425	CB ISD E	13.578	4.885	18.463
426	CB ISD A	4.436	1.339	5.775

TOTAL FOR STORAGE FACILITIES

CAPITAL COST:	4439.903
O&M:	758.631
TOTAL:	5198.535

PIPELINES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
686	MUD 5F	4693.015	998.979	5691.993
689	MUD 3F	1066.192	216.493	1282.684
698	MUD 3A	36711.315	7156.715	43868.030
702	MUD BENNINGTON 5H	393.612	70.809	464.421
705	MUD E-V-W 3A	433.899	78.055	511.954
717	MUD SPRINGFIELD 8EO	325.771	58.606	384.377
721	KINGS LAKE 5F	37.181	6.687	43.868
722	VALLEY 5E	203.046	36.530	239.576
724	ELKHORN 5E	149.055	26.815	175.869
726	COUNCIL BLUFFS 5F	1157.004	228.964	1385.968
727	COUNCIL BLUFFS 3F	177.030	31.850	208.880
601	SPRINGFIELD E	736.205	154.798	891.003
602	BENNINGTON E	439.602	106.001	545.603
603	ELKHORN A	439.028	135.683	574.711
604	VALLEY E	260.840	133.777	394.617
605	GRETNA A&D	1402.503	269.822	1672.325
621	METRO OMAHA A	59413.216	28073.711	87486.927
625	COUNCIL BLUFFS	3335.634	3175.614	6511.248

TOTAL FOR PIPELINES

CAPITAL COST: 111374.148
O&M: 40959.909
TOTAL: 152334.054

GRAND TOTAL

CAPITAL COST: 225212.195
O&M: 123263.629
TOTAL: 348475.821

Scheme IIIB

TREATMENT PLANTS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
043	SPRINGFIELD	3B	4272.452	1846.215	6118.666
055	COUNCIL BLUFFS	3B	8911.847	8992.750	17904.597
063	FLORENCE	3B	35217.423	37710.875	72928.298
067	PLATTE SOUTH	5B	3258.058	10528.117	13786.175
079	MISSOURI SOUTH	3B	26781.617	11660.536	38442.153
SH1	FLORENCE SLUDGE HAND		6609.587	0.000	6609.587
SH2	PLATTE S SLUDGE HAND		2699.467	0.000	2699.467
SH3	C B SLUDGE HANDLING		1762.601	0.000	1762.601

TOTAL FOR TREATMENT PLANTS

CAPITAL COST:	89513.052
O&M:	70738.493
TOTAL:	160251.544

BOOSTER STATIONS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
165	MUD BEDFORD	5F	422.980	449.537	872.517
166	MUD MORMAN	5F	267.385	487.799	755.184
167	MUD POPPLETON	5F	564.550	484.547	1049.097
168	MUD WALNUT HILL	5F	664.518	816.020	1480.537
169	MUD TURNER	5F	1274.081	1764.547	3038.628
171	MUD CORNHUSKER	5B&C	51.662	111.167	162.829
172	MUD 78TH ST	5F	287.568	1167.395	1454.963
174	MUD HARRISON	7B	672.158	862.998	1535.156
178	MUD HARTMAN	5B	838.653	716.297	1554.950
194	MUD RAINWOOD	3B	1560.093	732.504	2292.597
198	MUD 132ND ST	7B	512.333	424.639	936.972
220	MUD I-80	3B	901.981	587.972	1489.954
224	BENNINGTON	5B	276.543	151.654	428.197
228	GRETNA	5B	367.833	184.951	552.784
231	CB MT LINCOLN	5B	103.220	49.230	152.450
234	CB GLENDALE	5B	167.195	64.904	232.099
238	CB OAK ST	5B	91.572	67.045	158.617
242	CB ISD	5B	62.162	49.646	111.808

TOTAL FOR BOOSTER STATIONS

CAPITAL COST:	9086.487
O&M:	9172.852
TOTAL:	18259.339

STORAGE FACILITIES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
383	GRETNA B	138.366	36.812	175.178
386	SPRINGFIELD B	1172.331	29.863	1202.193
387	PAPILLION	1090.015	33.871	1123.886
388	OFFUTT	37.321	38.381	75.703
389	BELLEVUE	21.310	37.551	58.861
389	BELLEVUE 1	395.203	22.068	417.271
391	BENNINGTON-1 B	69.667	7.946	77.612
391	BENNINGTON B	1141.607	31.683	1173.290
393	ELKHORN-1 B	8.771	21.143	29.914
393	ELKHORN B	624.497	28.565	653.062
395	VALLEY B	598.729	28.447	627.176
396	WATERLOO	178.380	9.223	187.603
400	MUD WALNUT HILL	0.000	82.504	82.504
401	MUD FIELD CLUB	50.712	84.422	135.134
402	MUD 132ND ST	4.704	47.973	52.677
403	MUD 36TH & HARRISON	125.987	22.280	148.267
404	MUD NO. OMAHA	6.948	9.782	16.730
405	MUD RAINWOOD RD	244.172	31.280	275.452
406	MUD 132ND ST	138.956	24.597	163.553
415	CB MT LINCOLN	2.084	40.300	42.384
416	CB GLENDALE	4.892	40.300	45.192
417	CB MEMORIAL PARK	21.074	18.993	40.067
418	CB SIMMS	21.074	18.993	40.067
419	CB GRAND AVE	169.838	9.188	179.026
422	CB CRESTVIEW B&C	50.432	2.846	53.277
424	CB ISD	33.720	18.100	51.820
427	CB ISD B	4.436	1.339	5.775

TOTAL FOR STORAGE FACILITIES

CAPITAL COST:	6355.226
O&M:	778.450
TOTAL:	7133.674

PIPELINES

ID	TITLE	CAPITAL COST	O&M	TOTAL
		--------------PRESENT WORTH	--------------	--------------
686	MUD 5F	4693.015	998.979	5691.993
689	MUD 3F	1066.192	216.493	1282.684
699	MUD 3B	21726.951	4159.917	25886.868
703	MUD BENNINGTON 5B	1138.290	204.771	1343.061
706	MUD E-V-W 3B	1700.872	305.981	2006.854
718	MUD SPRINGFIELD 8B0	764.523	137.536	902.059
721	KINGS LAKE 5F	37.181	6.687	43.868
723	VALLEY 5B	245.240	44.119	289.359
725	ELKHORN 5B	275.340	49.536	324.876
726	COUNCIL BLUFFS 5F	1157.004	228.964	1385.968
727	COUNCIL BLUFFS 3F	177.030	31.850	208.880
613	SPRINGFIELD B	3378.222	536.197	3914.419
614	GRETNA B	4226.506	703.940	4930.446
615	ELKHORN B	2454.104	429.080	2883.184
616	VALLEY B	601.945	170.323	772.268
617	BENNINGTON B	2538.790	413.237	2952.027
622	METRO OMAHA B	31863.168	22950.966	54814.134
626	COUNCIL BLUFFS	2509.567	2884.423	5393.990

TOTAL FOR PIPELINES

CAPITAL COST:	80553.940
O&M:	34472.999
TOTAL:	115026.938

GRAND TOTAL

CAPITAL COST:	185508.705
O&M:	115162.794
TOTAL:	300671.495

Scheme IIIC

TREATMENT PLANTS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
042	SPRINGFIELD	3E	2550.511	1060.959	3611.470
056	COUNCIL BLUFFS	3C	9032.930	9049.156	18082.086
064	FLORENCE	3C	38631.376	39486.021	78117.397
068	PLATTE SOUTH	5C	5198.218	11563.290	16761.508
080	MISSOURI SOUTH	3C	32420.539	11149.119	43569.658
SH1	FLORENCE SLUDGE HAND		6609.587	0.000	6609.587
SH2	PLATTE S SLUDGE HAND		2699.467	0.000	2699.467
SH3	C B SLUDGE HANDLING		1762.601	0.000	1762.601

TOTAL FOR TREATMENT PLANTS

CAPITAL COST:	98905.229
O&M:	72308.545
TOTAL:	171213.774

BOOSTER STATIONS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
165	MUD BEDFORD	5F	422.980	449.537	872.517
166	MUD MORMAN	5F	267.385	487.799	755.184
167	MUD POPPLETON	5F	564.550	484.547	1049.097
168	MUD WALNUT HILL	5F	664.518	816.020	1480.537
169	MUD TURNER	5F	1274.081	1764.547	3038.628
171	MUD CORNHUSKER	5B&C	51.662	111.167	162.829
172	MUD 78TH ST	5F	287.568	1167.395	1454.963
175	MUD HARRISON	7C	672.158	1139.815	1811.973
179	MUD HARTMAN	5C	1086.817	993.146	2079.963
195	MUD RAINWOOD	3C	1350.935	466.100	1817.035
199	MUD 132ND ST	7C	512.333	485.506	997.839
206	MUD FORT ST	7C	59.816	16.711	76.528
221	MUD I-80	3C	938.078	543.600	1481.678
223	BENNINGTON	5E	74.913	29.923	104.835
229	GRETNA	5C	156.833	73.755	230.587
232	CB MT LINCOLN	5C	103.220	63.099	166.319
235	GLENDALE	5C	177.762	75.233	252.995
239	CB OAK ST	5C	101.765	77.415	179.181
243	CB ISD	5C	87.041	54.551	141.592

TOTAL FOR BOOSTER STATIONS

CAPITAL COST:	8854.415
O&M:	9299.866
TOTAL:	18154.280

STORAGE FACILITIES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
384	GRETNA C	115.424	35.328	150.751
385	SPRINGFIELD	372.196	22.273	394.469
387	PAPILLION	1090.015	33.871	1123.886
388	OFFUTT	37.321	38.381	75.703
389	BELLEVUE	21.310	37.551	58.861
389	BELLEVUE 1	395.203	22.068	417.271
390	BENNINGTON-1	69.667	7.946	77.612
390	BENNINGTON	414.211	20.311	434.522
392	ELKHORN-1	.877	8.163	9.040
392	ELKHORN	281.220	15.417	296.637
394	VALLEY	290.274	16.187	306.461
396	WATERLOO	178.380	9.223	187.603
400	MUD WALNUT HILL	0.000	82.504	82.504
401	MUD FIELD CLUB	50.712	84.422	135.134
402	MUD 132ND ST	4.704	47.973	52.677
403	MUD 36TH & HARRISON	125.987	22.280	148.267
404	MUD NO. OMAHA	6.948	9.782	16.730
405	MUD RAINWOOD RD	244.172	31.280	275.452
406	MUD 132ND ST	138.956	24.597	163.553
408	MUD 132ND ST C	4.472	2.772	7.245
410	MUD FORT ST E	213.066	28.309	241.375
415	CB MT LINCOLN	2.084	40.300	42.384
416	CB GLENDALE	4.892	40.300	45.192
417	CB MEMORIAL PARK	21.074	18.993	40.067
418	CB SIMMS	21.074	18.993	40.067
419	CB GRAND AVE	169.838	9.188	179.026
420	CB GRAND AVE E	23.090	1.122	24.212
422	CB CRESTVIEW B&C	50.432	2.846	53.277
424	CB ISD	33.720	18.100	51.820
425	CB ISD E	13.578	4.885	18.463
428	CB ISD C	4.272	1.122	5.394

TOTAL FOR STORAGE FACILITIES

CAPITAL COST:	4399.169
O&M:	756.487
TOTAL:	5155.655

PIPELINES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
686	MUD 5F	4693.015	998.979	5691.993
689	MUD 3F	1066.192	216.493	1282.684
700	MUD 3C	23567.265	4563.566	28130.831
704	MUD BENNINGTON 5C	423.319	76.153	499.472
707	MUD E-V-W 3C	1051.877	189.231	1241.108
717	MUD SPRINGFIELD 8E0	325.771	58.606	384.377
721	KINGS LAKE 5F	37.181	6.687	43.868
722	VALLEY 5E	203.046	36.530	239.576
724	ELKHORN 5E	149.055	26.815	175.869
726	COUNCIL BLUFFS 5F	1157.004	228.964	1385.968
727	COUNCIL BLUFFS 3F	177.030	31.850	208.880
600	GRETNA C	1622.727	330.301	1953.028
601	SPRINGFIELD E	736.205	154.798	891.003
602	BENNINGTON E	439.602	106.001	545.603
604	VALLEY E	260.840	133.777	394.617
606	ELKHORN C	439.028	135.683	574.711
623	METRO OMAHA C	46940.871	24708.756	71649.627
627	COUNCIL BLUFFS	2594.423	2795.186	5389.609

TOTAL FOR PIPELINES

CAPITAL COST:	85884.451
O&M:	34798.376
TOTAL:	120682.824

GRAND TOTAL

CAPITAL COST:	198043.264
O&M:	117163.274
TOTAL:	315206.533

Scheme IIID

TREATMENT PLANTS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
042	SPRINGFIELD	3E	2550.511	1060.959	3611.470
057	COUNCIL BLUFFS	3D	9199.046	9069.614	18268.660
065	FLORENCE	3D	32683.689	37518.292	70201.981
069	PLATTE SOUTH	5D	5198.218	11860.721	17058.938
081	MISSOURI SOUTH	3D	39227.714	12794.810	52022.524
SH1	FLORENCE SLUDGE HAND		6609.587	0.000	6609.587
SH2	PLATTE S SLUDGE HAND		2699.467	0.000	2699.467
SH3	C B SLUDGE HANDLING		1762.601	0.000	1762.601

TOTAL FOR TREATMENT PLANTS

CAPITAL COST:	99930.833
O&M:	72304.396
TOTAL:	172235.228

BOOSTER STATIONS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
165	MUD BEDFORD	5F	422.980	449.537	872.517
166	MUD MORMAN	5F	267.385	487.799	755.184
167	MUD POPPLETON	5F	564.550	484.547	1049.097
168	MUD WALNUT HILL	5F	664.518	816.020	1480.537
169	MUD TURNER	5F	1274.081	1764.547	3038.628
170	MUD CORNHUSKER	5A&D	51.662	103.180	154.842
172	MUD 78TH ST	5F	287.568	1167.395	1454.963
176	MUD HARRISON	7D	672.158	854.615	1526.773
180	MUD HARTMAN	5D	721.403	707.948	1429.351
196	MUD RAINWOOD	3D	1350.935	527.599	1878.535
200	MUD 132ND ST	7D	554.902	492.826	1047.728
207	MUD FORT ST	7D	340.037	152.835	492.872
222	MUD I-80	3D	1319.965	989.322	2309.287
223	BENNINGTON	5E	74.913	29.923	104.835
227	GRETNA 5A&D		302.643	82.072	384.715
230	CB MT LINCOLN	5A-D	103.220	49.230	152.450
236	GLENDALE	5D	181.495	71.075	252.569
240	CB OAK ST	5D	105.498	85.615	191.113
244	CB ISD	5D	106.798	67.557	174.355

TOTAL FOR BOOSTER STATIONS

CAPITAL COST:	9366.711
O&M:	9383.642
TOTAL:	18750.351

STORAGE FACILITIES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
382	GRETNA A&D	119.814	35.626	155.441
385	SPRINGFIELD	372.196	22.273	394.469
387	PAPILLION	1090.015	33.871	1123.886
388	OFFUTT	37.321	38.381	75.703
389	BELLEVUE	21.310	37.551	58.861
389	BELLEVUE 1	395.203	22.068	417.271
390	BENNINGTON-1	69.667	7.946	77.612
390	BENNINGTON	414.211	20.311	434.522
392	ELKHORN-1	.877	8.163	9.040
392	ELKHORN	281.220	15.417	296.637
394	VALLEY	290.274	16.187	306.461
396	WATERLOO	178.380	9.223	187.603
400	MUD WALNUT HILL	0.000	82.504	82.504
401	MUD FIELD CLUB	50.712	84.422	135.134
402	MUD 132ND ST	4.704	47.973	52.677
403	MUD 36TH & HARRISON	125.987	22.280	148.267
404	MUD NO. OMAHA	6.948	9.782	16.730
405	MUD RAINWOOD RD	244.172	31.280	275.452
406	MUD 132ND ST	138.956	24.597	163.553
409	MUD 132ND ST D	7.454	2.908	10.361
410	MUD FORT ST E	213.066	28.309	241.375
415	CB MT LINCOLN	2.084	40.300	42.384
416	CB GLENDALE	4.892	40.300	45.192
417	CB MEMORIAL PARK	21.074	18.993	40.067
418	CB SIMMS	21.074	18.993	40.067
419	CB GRAND AVE	169.838	9.188	179.026
420	CB GRAND AVE E	23.090	1.122	24.212
423	CB CRESTVIEW D	93.163	4.885	98.048
424	CB ISD	33.720	18.100	51.820
425	CB ISD E	13.578	4.885	18.463
429	CB ISD D	4.601	1.555	6.157

TOTAL FOR STORAGE FACILITIES

CAPITAL COST:	4449.601
O&M:	759.393
TOTAL:	5208.995

PIPELINES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
686	MUD 5F	4693.015	998.979	5691.993
689	MUD 3F	1066.192	216.493	1282.684
701	MUD 3D	37928.755	7443.595	45372.350
702	MUD BENNINGTON 5H	393.612	70.809	464.421
708	MUD E-V-W 3D	701.610	126.215	827.825
717	MUD SPRINGFIELD 8ED	325.771	58.606	384.377
721	KINGS LAKE 5F	37.181	6.687	43.868
722	VALLEY 5E	203.046	36.530	239.576
724	ELKHORN 5E	149.055	26.815	175.869
726	COUNCIL BLUFFS 5F	1157.004	228.964	1385.968
727	COUNCIL BLUFFS 3F	177.030	31.850	208.880
601	SPRINGFIELD E	736.205	154.798	891.003
602	BENNINGTON E	439.602	106.001	545.603
604	VALLEY E	260.840	133.777	394.617
605	GRETNA A&D	1402.503	269.822	1672.325
607	ELKHORN D	402.543	118.196	520.739
624	METRO OMAHA D	56393.485	27305.619	83699.104
628	COUNCIL BLUFFS	3375.799	3134.328	6510.127

TOTAL FOR PIPELINES

CAPITAL COST:	109843.248
O&M:	40468.084
TOTAL:	150311.329

GRAND TOTAL

CAPITAL COST:	223590.393
O&M:	122915.515
TOTAL:	346505.903

NON-METROPOLITAN AREA

Scheme IE1

TREATMENT PLANTS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
002	BLAIR	1B	8693.840	3906.820	12600.660
007	MODALE	1F	1162.285	159.816	1322.101
008	PISGAH	1F	883.258	267.870	1151.127
009	MAGNOLIA	1F	1003.362	194.429	1197.791
010	DUNLAP	1F	1757.173	512.595	2269.768
012	MISSOURI VALLEY	1B	3776.830	1770.131	5546.960
015	HONEY CREEK	1F	1167.561	394.719	1562.280
016	NEOLA	1F	2102.784	717.537	2820.321
017	AVOCA	1F	1835.901	717.537	2553.438
018	WALNUT	1F	1185.033	409.969	1595.003
019	POTT RWD6	1F	1523.651	435.580	1959.231
020	OAKLAND	1F	1338.917	323.726	1662.643
021	CARSON	1F	806.329	229.802	1036.131
022	POTT RWD 7	1F	806.329	195.852	1002.182
023	HENDERSON	1F	1089.565	276.501	1366.066
024	MILLS RWD 3	1F	2222.513	583.262	2805.776
027	PACIFIC JUNCTION	1B1	5752.755	3163.505	8916.260
032	PLATTSMOUTH	1B1	2364.347	2003.842	4368.189
035	LOUISVILLE	1F	1485.407	405.058	1890.464
036	GREENWOOD	1F	594.136	163.848	757.984
037	NEHAWKA	1F	319.064	126.181	445.246
038	UNION	1F	257.727	104.738	362.465
039	WEEPING WATER	1F	914.400	190.436	1104.836
SH4	PLATTSMOUTH SLUD HAN		911.381	0.000	911.381
SH5	PAC JUNCTION SLD HND		9.537	0.000	9.537

TOTAL FOR TREATMENT PLANTS

CAPITAL COST:	43964.085
O&M:	17253.754
TOTAL:	61217.840

BOOSTER STATIONS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
102	FT CALHOUN	7B	52.230	65.188	117.418
103	WASHINGTON	5F	13.522	4.983	18.505
104	SW WASH CO	5F	27.413	24.593	52.006
105	S WASH CO	5F	32.557	37.861	70.417
106	WASH CO RWD 8	5F	26.889	28.401	55.290
107	WASH CO RWD 7	5F	20.064	13.912	33.976
108	LOGAN	1F	22.828	12.907	35.735
109	HARRISON RWD 5	1F	11.281	3.850	15.132
110	PERSIA	5F	14.915	7.359	22.273
113	HARRISON RWD 1	5F	22.176	17.936	40.111
121	POTT CO RWD1	1F	21.499	17.343	38.842
122	POTT CO RWD2	1F	19.296	1.948	21.245
123	POTT CO RWD3	1F	23.459	21.971	45.430
124	POTT CO RWD4	1F	17.812	11.105	28.918
125	POTT CO RWD5	1F	20.064	14.776	34.840
126	POTT CO RWD6	1F	19.296	22.497	41.793
127	POTT CO RWD7	1F	15.755	8.728	24.482
128	POTT CO RWD8	1F	32.436	23.961	56.396
137	GLENWOOD	1B	161.341	255.967	417.309
138	MILLS CO RWD1-N	1F	15.130	7.997	23.127
139	MILLS CO RWD1-S	1F	10.954	3.673	14.627
140	MILLS CO RWD2-N	1F	17.638	11.295	28.933
141	MILLS CO RWD2-S	1F	13.011	5.595	18.606
142	MILLS CO RWD3	1F	15.130	7.951	23.081
156	CASS CO RWD1-1	5F	11.180	20.347	31.528
157	CASS CO RWD1-2	5F	10.602	16.458	27.061
158	OTOE CO RWD3	5F	28.068	11.804	39.872
159	CASS CO RWD 3-1	5F	16.917	7.228	24.145
160	CASS CO RWD 3-2	1F	16.349	7.692	24.041
161	CASS CO RWD3-3	5F	28.643	19.133	47.776
162	CASS CO RWD3-4	1F	34.991	30.963	65.955
245	CB EAST BELLEVUE	6B	141.850	69.371	211.220

TOTAL FOR BOOSTER STATIONS

CAPITAL COST:	935.296
O&M:	814.793
TOTAL:	1750.090

STORAGE FACILITIES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
300	ARLINGTON	216.066	11.527	227.593
303	HERMAN	85.342	8.490	93.832
304	KENNARD	81.862	7.943	89.805
305	WASHINGTON	64.160	3.698	67.858
306	DUNLAP	145.352	10.733	156.085
307	LITTLE SIOUX	93.179	8.776	101.955
308	LOGAN	74.502	13.032	87.534
309	MAGNOLIA	62.360	7.358	69.718
311	MODALE	134.559	7.801	142.360
312	MONDAMIN	120.052	8.708	128.759
313	PERSIA	128.399	9.075	137.474
314	PISGAH	.746	7.946	8.692
315	WOODBINE	223.032	12.200	235.232
316	AVOCA	.934	8.245	9.178
316	AVOCA-1	276.439	14.500	290.939
317	CARSON	169.475	9.842	179.317
318	CRESENT	71.876	8.460	80.336
319	HANCOCK	71.824	8.469	80.294
320	MACEDONIA	139.764	8.054	147.818
321	MCCLELAND	44.058	3.548	47.606
322	MINDEN	125.478	9.744	135.222
323	NEOLA	219.573	11.206	230.780
324	OAKLAND	2.986	11.633	14.618
324	OAKLAND-1	232.973	13.221	246.194
325	TREYNOR	228.992	12.551	241.543
326	UNDERWOOD	184.597	9.718	194.315
327	WALNUT	203.862	10.659	214.521
328	EMERSON	157.130	8.881	166.011
329	GLENWOOD	18.150	34.253	52.403
329	GLENWOOD-1	179.167	11.320	190.487
329	GLENWOOD-2	527.199	26.781	553.980
329	GLENWOOD-3	59.665	25.129	84.794
329	GLENWOOD-4	48.822	9.020	57.843
329	GLENWOOD-5	53.986	16.694	70.680
330	HASTINGS	60.958	7.633	68.591
331	HENDERSON	60.958	7.633	68.591
332	MALVERN	174.469	9.764	184.234
333	PACIFIC JUNCTION	57.871	4.140	62.011
334	SILVER CITY	56.093	7.483	63.576
335	TABOR	1.586	9.320	10.906
335	TABOR-1	150.124	8.690	158.814
336	ALVO	134.559	7.801	142.360
337	AVOCA	95.706	7.633	103.339
338	EAGLE	158.756	9.223	167.979
339	ELMWOOD	184.650	10.804	195.453
340	GREENWOOD	172.669	9.835	182.504
341	LOUISVILLE	125.991	9.615	135.606
343	MURDOCK	143.168	8.390	151.559
344	MURRAY	99.880	7.823	107.703
345	NEHAWKA	.922	8.318	9.240
347	UNION	109.619	8.245	117.864
348	WEEPING WATER	51.921	13.619	65.540
349	BLAIR B	48.450	38.639	87.090
350	MISSOURI VALLEY B	24.478	31.580	56.057
351	PLATTSMOUTH B	660.621	37.415	698.036
351	PLATTSMOUTH-1 B	111.624	31.664	143.288
352	FORT CALHOUN B	96.782	30.353	127.135
353	WASH CO RWD I	60.523	4.732	65.255
354	WASH CO RWD II	.648	4.291	4.940

354	WASH CO RWD-1 II	54.418	3.989	58.406
355	WASH CO RWD III	64.846	4.884	69.730
356	WASH CO RWD IV	77.815	5.325	83.140
357	WASH CO RWD V	54.038	4.509	58.547
358	WASH CO RWD VI	103.754	6.220	109.974
359	WASH CO RWD VII	110.238	6.444	116.682
360	WASH CO RWD VIII	29.004	11.268	40.272
361	HARR CO RWD I	114.561	6.589	121.150
361	HARR CO RWD-1 I	114.561	6.589	121.150
362	HARR CO RWD II	112.400	6.516	118.916
362	HARR CO RWD-1 II	112.400	6.516	118.916
363	HARR CO RWD III	90.784	5.772	96.557
363	HARR CO RWD-1 III	90.784	5.772	96.557
364	HARR CO RWD-2 III	90.784	5.772	96.557
364	HARR CO RWD IV	34.585	3.844	38.428
364	HARR CO RWD-1 IV	34.585	3.844	38.428
365	HARR CO RWD V	54.038	4.509	58.547
365	HARR CO RWD-1 V	54.038	4.509	58.547
366	HARR CO RWD VI	58.361	4.660	63.021
366	HARR CO RWD-2 VI	58.361	4.660	63.021
367	POTT CO RWD I	30.439	13.348	43.788
368	POTT CO RWD II	30.644	13.644	44.289
369	POTT CO RWD III	27.671	9.340	37.011
370	POTT CO RWD IV	27.056	8.445	35.501
371	POTT CO RWD V	28.953	11.196	40.149
372	POTT CO RWD VI	269.977	14.836	284.812
373	POTT CO RWD VII	28.953	11.196	40.149
374	POTT CO RWD VIII	26.697	7.925	34.622
375	MILL CO RWD I	25.057	5.549	30.606
375	MILL CO RWD-1 I	26.697	7.925	34.622
376	MILL CO RWD II	26.441	7.556	33.997
376	MILL CO RWD-1 II	25.262	5.845	31.107
376	MILL CO RWD-2 II	68.229	4.588	72.817
377	MILL CO RWD III	105.915	6.292	112.208
377	MILL CO RWD-1 III	105.915	6.292	112.208
377	MILL CO RWD-2 III	73.408	4.811	78.220
378	CASS CO RWD I	-.553	9.814	9.262
378	CASS CO RWD-1 I	-.819	12.899	12.080
379	CASS CO RWD II	106.140	8.095	114.235
380	CASS CO RWD III	56.200	4.588	60.788
380	CASS CO RWD-1 III	56.200	4.588	60.788
380	CASS CO RWD-2 III	58.361	4.660	63.021
381	OTOE CO RWD III	179.167	11.320	190.487
397	DEER CREEK	369.072	17.447	386.519
398	FLORENCE PREC	151.391	8.148	159.540
399	EAST BELLEVUE	396.539	18.195	414.734

TOTAL FOR STORAGE FACILITIES

CAPITAL COST:	11102.954
O&M:	1074.591
TOTAL:	12177.553

PIPELINES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
629	WASH CO RWD ALL	87.533	15.744	103.277
630	WASH CO RWD ALL	3176.940	571.516	3748.457
632	WASH CO RWD 7F	460.756	82.886	543.643
633	WASH CO RWD 7B	1829.087	332.230	2161.317
635	HARR CO RWD ALL	1184.789	213.136	1397.925
636	HARR CO RWD 1F	464.642	83.584	548.226
637	HARR CO RWD 1F	3270.449	588.340	3858.788
650	POTT CO RWD 1F	756.116	136.022	892.138
651	POTT CO RWD 1F	7842.536	1410.839	9253.374
655	MILLS CO RWD 1F	319.829	58.558	378.388
656	MILLS CO RWD 1F	6696.475	1204.666	7901.141
657	MILLS CO RWD 1F1	550.845	100.844	651.689
666	CASS CO RWD1 5F	-18.718	183.183	164.466
670	CASS CO RWD3 F	429.627	77.285	506.912
671	CASS CO RWD3 F	1854.180	333.560	2187.740
674	OTOE CO RWD III 5F	1186.611	209.884	1396.495
676	CASS CO RWD 4 5F	254.015	45.698	299.714
680	DEER CREEK 7B	354.313	63.740	418.052
681	FLORENCE PREC 7B	70.125	12.618	82.743
684	EAST BELLEVUE 6B	458.939	82.564	541.502
550	ARLINGTON	108.850	70.693	179.543
553	KENNARD	1.207	20.157	21.364
554	WASHINGTON	22.716	7.817	30.533
555	HERMAN	0.000	18.778	18.778
556	DUNLAP	47.585	84.455	132.040
557	LITTLE SIOUX	10.625	15.897	26.523
558	LOGAN	63.951	100.875	164.827
559	MAGNOLIA	0.000	12.154	12.154
561	MODALE	0.000	16.866	16.866
562	MODAMIN	0.000	23.867	23.867
563	PERSIA	0.000	18.429	18.429
564	PISGAH	6.278	18.062	24.341
565	WOODBINE	90.337	94.143	184.479
566	AVOCA	0.000	88.494	88.494
567	CARSON	35.225	50.527	85.752
568	CRESENT	36.080	22.248	58.328
569	HANCOCK	10.519	15.215	25.734
570	MACEDONIA	26.674	23.715	50.390
571	MCCLELLAND	1.192	8.913	10.105
572	MINDEN	22.781	29.321	52.102
573	NEOLA	63.372	67.241	130.613
574	OAKLAND	61.446	104.919	166.365
575	TREYNOR	233.840	62.701	296.541
576	UNDERWOOD	103.465	40.675	144.140
577	WALNUT	49.120	59.285	108.404
578	EMERSON	23.467	32.448	55.915
580	HASTINGS	0.000	9.914	9.914
581	HENDERSON	0.000	11.780	11.780
582	MALVERN	0.000	63.944	63.944
583	PACIFIC JUNCTION	0.000	27.951	27.951
584	SILVER CITY	0.000	14.286	14.286
585	TABOR	30.708	61.782	92.490
586	ALVO	0.000	8.438	8.438
587	AVOCA	10.481	15.272	25.753
588	EAGLE	89.105	39.542	128.647
589	ELMWOOD	55.934	41.039	96.973
590	GREENWOOD	96.046	44.449	140.495
591	LOUISVILLE	0.000	56.380	56.380
592	MANLEY	30.408	13.464	43.872

593	MURDOCK	13.085	17.637	30.721
594	MURRAY	9.901	18.604	28.505
595	NEHAWKA	24.047	21.388	45.435
597	UNION	0.000	15.248	15.248
598	WEEPING WATER	58.495	77.119	135.614
599	WATERLOO	31.872	31.728	63.600
609	FT CALHOUN B	958.453	175.180	1133.632
608	BLAIR B	3183.001	780.778	3963.779
610	MISSOURI VALLEY B	1095.512	350.732	1446.244
611	GLENWOOD B	943.043	361.692	1304.735
612	PLATTSMOUTH B	2303.770	667.166	2970.935
618	FLORENCE PREC B	338.069	50.701	388.770
619	DEER CREEK B	897.938	133.163	1031.101
620	EAST BELLEVUE B	1183.241	177.453	1360.694

TOTAL FOR PIPELINES

CAPITAL COST:	43600.928
O&M:	10201.623
TOTAL:	53802.550

GRAND TOTAL

CAPITAL COST:	99603.263
O&M:	29344.761
TOTAL:	128948.033

Scheme IB1

TREATMENT PLANTS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
001	BLAIR	1E	5941.985	2511.849	8453.834
007	MODALE	1F	1162.285	159.816	1322.101
008	PISGAH	1F	883.258	267.870	1151.127
009	MAGNOLIA	1F	1003.362	194.429	1197.791
010	DUNLAP	1F	1757.173	512.595	2269.768
011	MISSOURI VALLEY	1E	2557.152	1153.649	3710.800
015	HONEY CREEK	1F	1167.561	394.719	1562.280
016	NEOLA	1F	2102.784	717.537	2820.321
017	AVOCA	1F	1835.901	717.537	2553.438
018	WALNUT	1F	1185.033	409.969	1595.003
019	POTT RWD6	1F	1523.651	435.580	1959.231
020	OAKLAND	1F	1338.917	323.726	1662.643
021	CARSON	1F	806.329	229.802	1036.131
022	POTT RWD 7	1F	806.329	195.852	1002.182
023	HENDERSON	1F	1089.565	276.501	1366.066
024	MILLS RWD 3	1F	2222.513	583.262	2805.776
025	PACIFIC JUNCTION	1E1	5514.343	3041.006	8555.349
031	PLATTSMOUTH	1E1	399.960	1133.794	1533.755
035	LOUISVILLE	1F	1485.407	405.058	1890.464
036	GREENWOOD	1F	594.136	163.848	757.984
037	NEHAWKA	1F	319.064	126.181	445.246
038	UNION	1F	257.727	104.738	362.465
039	WEEPING WATER	1F	914.400	190.436	1104.836
SH4	PLATTSMOUTH SLUD HAN		911.381	0.000	911.381
SH5	PAC JUNCTION SLD HND		9.537	0.000	9.537

TOTAL FOR TREATMENT PLANTS

CAPITAL COST: 37789.753

O&M: 14249.754

TOTAL: 52039.509

BOOSTER STATIONS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
100	WASH CO RWD 4	7E	13.888	6.398	20.285
101	FT CALHOUN	7E	29.297	19.737	49.033
103	WASHINGTON	5F	13.522	4.983	18.505
104	SW WASH CO	5F	27.413	24.593	52.006
105	S WASH CO	5F	32.557	37.861	70.417
106	WASH CO RWD 8	5F	26.889	28.401	55.290
107	WASH CO RWD 7	5F	20.064	13.912	33.976
108	LOGAN	1F	22.828	12.907	35.735
109	HARRISON RWD 5	1F	11.281	3.850	15.132
110	PERSIA	5F	14.915	7.359	22.273
113	HARRISON RWD 1	5F	22.176	17.936	40.111
121	POTT CO RWD1	1F	21.499	17.343	38.842
122	POTT CO RWD2	1F	19.296	1.948	21.245
123	POTT CO RWD3	1F	23.459	21.971	45.430
124	POTT CO RWD4	1F	17.812	11.105	28.918
125	POTT CO RWD5	1F	20.064	14.776	34.840
126	POTT CO RWD6	1F	19.296	22.497	41.793
127	POTT CO RWD7	1F	15.755	8.728	24.482
128	POTT CO RWD8	1F	32.436	23.961	56.396
136	GLENWOOD	1E	153.522	242.311	395.833
138	MILLS CO RWD1-N	1F	15.130	7.997	23.127
139	MILLS CO RWD1-S	1F	10.954	3.673	14.627
140	MILLS CO RWD2-N	1F	17.638	11.295	28.933
141	MILLS CO RWD2-S	1F	13.011	5.595	18.606
142	MILLS CO RWD3	1F	15.130	7.951	23.081
156	CASS CO RWD1-1	5F	11.180	20.347	31.528
157	CASS CO RWD1-2	5F	10.602	16.458	27.061
158	OTOE CO RWD3	5F	28.068	11.804	39.872
159	CASS CO RWD 3-1	5F	16.917	7.228	24.145
160	CASS CO RWD 3-2	1F	16.349	7.692	24.041
161	CASS CO RWD3-3	5F	28.643	19.133	47.776
162	CASS CO RWD3-4	1F	34.991	30.963	65.955

TOTAL FOR BOOSTER STATIONS

CAPITAL COST:	776.582
O&M:	692.713
TOTAL:	1469.294

STORAGE FACILITIES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
300	ARLINGTON	216.066	11.527	227.593
301	BLAIR	32.827	37.527	70.354
302	FORT CALHOUN	89.342	19.113	108.455
303	HERMAN	85.342	8.490	93.832
304	KENNARD	81.862	7.943	89.805
305	WASHINGTON	64.160	3.698	67.858
306	DUNLAP	145.352	10.733	156.085
307	LITTLE SIOUX	93.179	8.776	101.955
308	LOGAN	74.502	13.032	87.534
309	MAGNOLIA	62.360	7.358	69.718
310	MISSOURI VALLEY	8.244	21.950	30.194
311	MODALE	134.559	7.801	142.360
312	MONDAMIN	120.052	8.708	128.759
313	PERSIA	128.399	9.075	137.474
314	PISGAH	.746	7.946	8.692
315	WOODBINE	223.032	12.200	235.232
316	AVOCA	.934	8.245	9.178
316	AVOCA-1	276.439	14.500	290.939
317	CARSON	169.475	9.842	179.317
318	CRESENT	71.876	8.460	80.336
319	HANCOCK	71.824	8.469	80.294
320	MACEDONIA	139.764	8.054	147.818
321	MCCLELAND	44.058	3.548	47.606
322	MINDEN	125.478	9.744	135.222
323	NEOLA	219.573	11.206	230.780
324	OAKLAND	2.986	11.633	14.618
324	OAKLAND-1	232.973	13.221	246.194
325	TREYNOR	228.992	12.551	241.543
326	UNDERWOOD	184.597	9.718	194.315
327	WALNUT	203.862	10.659	214.521
328	EMERSON	157.130	8.881	166.011
329	GLENWOOD	18.150	34.253	52.403
329	GLENWOOD-1	179.167	11.320	190.487
329	GLENWOOD-2	527.199	26.781	553.980
329	GLENWOOD-3	59.665	25.129	84.794
329	GLENWOOD-4	48.822	9.020	57.843
329	GLENWOOD-5	53.986	16.694	70.680
330	HASTINGS	60.958	7.633	68.591
331	HENDERSON	60.958	7.633	68.591
332	MALVERN	174.469	9.764	184.234
333	PACIFIC JUNCTION	57.871	4.140	62.011
334	SILVER CITY	56.093	7.483	63.576
335	TABOR	1.586	9.320	10.906
335	TABOR-1	150.124	8.690	158.814
336	ALVO	134.559	7.801	142.360
337	AVOCA	95.706	7.633	103.339
338	EAGLE	158.756	9.223	167.979
339	ELMWOOD	184.650	10.804	195.453
340	GREENWOOD	172.669	9.835	182.504
341	LOUISVILLE	125.991	9.615	135.606
343	MURDOCK	143.168	8.390	151.559
344	MURRAY	99.880	7.823	107.703
345	NEHAWKA	.922	8.318	9.240
346	PLATTSMOUTH	660.621	37.415	698.036
346	PLATTSMOUTH-1	111.786	31.671	143.457
347	UNION	109.619	8.245	117.864
348	WEEPING WATER	51.921	13.619	65.540
353	WASH CO RWD I	60.523	4.732	65.255
354	WASH CO RWD II	.648	4.291	4.940

354	WASH CO RWD-1 II	54.418	3.989	58.406
355	WASH CO RWD III	64.846	4.884	69.730
356	WASH CO RWD IV	77.815	5.325	83.140
357	WASH CO RWD V	54.038	4.509	58.547
358	WASH CO RWD VI	103.754	6.220	109.974
359	WASH CO RWD VII	110.238	6.444	116.682
360	WASH CO RWD VIII	29.004	11.268	40.272
361	HARR CO RWD I	114.561	6.589	121.150
361	HARR CO RWD-1 I	114.561	6.589	121.150
362	HARR CO RWD II	112.400	6.516	118.916
362	HARR CO RWD-1 II	112.400	6.516	118.916
363	HARR CO RWD III	90.784	5.772	96.557
363	HARR CO RWD-1 III	90.784	5.772	96.557
364	HARR CO RWD-2 III	90.784	5.772	96.557
364	HARR CO RWD IV	34.585	3.844	38.428
364	HARR CO RWD-1 IV	34.585	3.844	38.428
365	HARR CO RWD V	54.038	4.509	58.547
365	HARR CO RWD-1 V	54.038	4.509	58.547
366	HARR CO RWD VI	58.361	4.660	63.021
366	HARR CO RWD-2 VI	58.361	4.660	63.021
367	POTT CO RWD I	30.439	13.348	43.788
368	POTT CO RWD II	30.644	13.644	44.289
369	POTT CO RWD III	27.671	9.340	37.011
370	POTT CO RWD IV	27.056	8.445	35.501
371	POTT CO RWD V	28.953	11.196	40.149
372	POTT CO RWD VI	269.977	14.836	284.812
373	POTT CO RWD VII	28.953	11.196	40.149
374	POTT CO RWD VIII	26.697	7.925	34.622
375	MILL CO RWD I	25.057	5.549	30.606
375	MILL CO RWD-1 I	26.697	7.925	34.622
376	MILL CO RWD II	26.441	7.556	33.997
376	MILL CO RWD-1 II	25.262	5.845	31.107
376	MILL CO RWD-2 II	68.229	4.588	72.817
377	MILL CO RWD III	105.915	6.292	112.208
377	MILL CO RWD-1 III	105.915	6.292	112.208
377	MILL CO RWD-2 III	73.408	4.811	78.220
378	CASS CO RWD I	-.553	9.814	9.262
378	CASS CO RWD-1 I	-.819	12.899	12.080
379	CASS CO RWD II	106.140	8.095	114.235
380	CASS CO RWD III	56.200	4.588	60.788
380	CASS CO RWD-1 III	56.200	4.588	60.788
380	CASS CO RWD-2 III	58.361	4.660	63.021
381	OTOE CO RWD III	179.167	11.320	190.487

TOTAL FOR STORAGE FACILITIES

CAPITAL COST:	10146.817
O&M:	1008.826
TOTAL:	11155.650

PIPELINES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
629	WASH CO RWD ALL	87.533	15.744	103.277
630	WASH CO RWD ALL	3176.940	571.516	3748.457
631	WASH CO RWD 7E	1216.398	220.942	1437.340
632	WASH CO RWD 7F	460.756	82.886	543.643
635	HARR CO RWD ALL	1184.789	213.136	1397.925
636	HARR CO RWD 1F	464.642	83.584	548.226
637	HARR CO RWD 1F	3270.449	588.340	3858.788
650	POTT CO RWD 1F	756.116	136.022	892.138
651	POTT CO RWD 1F	7842.536	1410.839	9253.374
655	MILLS CO RWD 1F	319.829	58.558	378.388
656	MILLS CO RWD 1F	6696.475	1204.666	7901.141
657	MILLS CO RWD 1F1	550.845	100.844	651.689
666	CASS CO RWD1 5F	-18.718	183.183	164.466
670	CASS CO RWD3 F	429.627	77.285	506.912
671	CASS CO RWD3 F	1854.180	333.560	2187.740
674	OTOE CO RWD III 5F	1186.611	209.884	1396.495
676	CASS CO RWD 4 5F	254.015	45.698	299.714
550	ARLINGTON	108.850	70.693	179.543
551	BLAIR	821.238	487.566	1308.804
552	FT. CALHOUN	185.071	65.803	250.873
553	KENNARD	1.207	20.157	21.364
554	WASHINGTON	22.716	7.817	30.533
555	HERMAN	0.000	18.778	18.778
556	DUNLAP	47.585	84.455	132.040
557	LITTLE SIOUX	10.625	15.897	26.523
558	LOGAN	63.951	100.876	164.827
559	MAGNOLIA	0.000	12.154	12.154
560	MISSOURI VALLEY	114.738	227.426	342.165
561	MODALE	0.000	16.866	16.866
562	MODAMIN	0.000	23.867	23.867
563	PERSIA	0.000	18.429	18.429
564	PISGAH	6.278	18.062	24.341
565	WOODBINE	90.337	94.143	184.479
566	AVOCA	0.000	88.494	88.494
567	CARSON	35.225	50.527	85.752
568	CRESENT	36.080	22.248	58.328
569	HANCOCK	10.519	15.215	25.734
570	MACEDONIA	26.674	23.715	50.390
571	MCCLELLAND	1.192	8.913	10.105
572	MINDEN	22.781	29.321	52.102
573	NEOLA	63.372	67.241	130.613
574	OAKLAND	61.446	104.919	166.365
575	TREYNOR	233.840	62.701	296.541
576	UNDERWOOD	103.465	40.675	144.140
577	WALNUT	49.120	59.285	108.404
578	EMERSON	23.467	32.448	55.915
579	GLENWOOD	653.324	360.395	1013.719
580	HASTINGS	0.000	9.914	9.914
581	HENDERSON	0.000	11.780	11.780
582	MALVERN	0.000	63.944	63.944
583	PACIFIC JUNCTION	0.000	27.951	27.951
584	SILVER CITY	0.000	14.286	14.286
585	TABOR	30.708	61.782	92.490
586	ALVO	0.000	8.438	8.438
587	AVOCA	10.481	15.272	25.753
588	EAGLE	89.105	39.542	128.647
589	ELMWOOD	55.934	41.039	96.973
590	GREENWOOD	96.046	44.449	140.495
591	LOUISVILLE	0.000	56.380	56.380

592	MANLEY	30.408	13.464	43.872
593	MURDOCK	13.085	17.637	30.721
594	MURRAY	9.901	18.604	28.505
595	NEHAWKA	24.047	21.388	45.435
596	PLATTSMOUTH	330.290	430.556	760.846
597	UNION	0.000	15.248	15.248
598	WEEPING WATER	58.495	77.119	135.614
599	WATERLOO	31.872	31.728	63.600

TOTAL FOR PIPELINES

CAPITAL COST:	33306.496
O&M:	8806.294
TOTAL:	42112.793

GRAND TOTAL

CAPITAL COST:	82019.648
O&M:	24757.587
TOTAL:	106777.246

Scheme IE2

TREATMENT PLANTS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
002	BLAIR	1B	8693.840	3906.820	12600.660
007	MODALE	1F	1162.285	159.816	1322.101
008	PISGAH	1F	883.258	267.870	1151.127
009	MAGNOLIA	1F	1003.362	194.429	1197.791
010	DUNLAP	1F	1757.173	512.595	2269.768
012	MISSOURI VALLEY	1B	3776.830	1770.131	5546.960
015	HONEY CREEK	1F	1167.561	394.719	1562.280
016	NEOLA	1F	2102.784	717.537	2820.321
017	AVOCA	1F	1835.901	717.537	2553.438
018	WALNUT	1F	1185.033	409.969	1595.003
019	POTT RWD6	1F	1523.651	435.580	1959.231
020	OAKLAND	1F	1338.917	323.726	1662.643
021	CARSON	1F	806.329	229.802	1036.131
022	POTT RWD 7	1F	806.329	195.852	1002.182
023	HENDERSON	1F	1089.565	276.501	1366.066
024	MILLS RWD 3	1F	2222.513	583.262	2805.776
028	PACIFIC JUNCTION	1B2	5878.429	2675.283	8553.712
034	PLATTSMOUTH	1B2	5840.887	2265.855	8106.742
035	LOUISVILLE	1F	1485.407	405.058	1890.464
036	GREENWOOD	1F	594.136	163.848	757.984
037	NEHAWKA	1F	319.064	126.181	445.246
038	UNION	1F	257.727	104.738	362.465
039	WEEPING WATER	1F	914.400	190.436	1104.836

TOTAL FOR TREATMENT PLANTS

CAPITAL COST:	46645.381
O&M:	17027.545
TOTAL:	63672.927

BOOSTER STATIONS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
102	FT CALHOUN	7B	52.230	65.188	117.418
103	WASHINGTCN	5F	13.522	4.983	18.505
104	SW WASH CO	5F	27.413	24.593	52.006
105	S WASH CO	5F	32.557	37.861	70.417
106	WASH CO RWD 8	5F	26.889	28.401	55.290
107	WASH CO RWD 7	5F	20.064	13.912	33.976
108	LOGAN	1F	22.828	12.907	35.735
109	HARRISON RWD 5	1F	11.281	3.850	15.132
110	PERSIA	5F	14.915	7.359	22.273
113	HARRISON RWD 1	5F	22.176	17.936	40.111
121	POTT CO RWD1	1F	21.499	17.343	38.842
122	POTT CO RWD2	1F	19.296	1.948	21.245
123	POTT CO RWD3	1F	23.459	21.971	45.430
124	POTT CO RWD4	1F	17.812	11.105	28.918
125	POTT CO RWD5	1F	20.064	14.776	34.840
126	POTT CO RWD6	1F	19.296	22.497	41.793
127	POTT CO RWD7	1F	15.755	8.728	24.482
128	POTT CO RWD8	1F	32.436	23.961	56.396
137	GLENWOOD	1B	161.341	255.967	417.309
138	MILLS CO RWD1-N	1F	15.130	7.997	23.127
139	MILLS CO RWD1-S	1F	10.954	3.673	14.627
140	MILLS CO RWD2-N	1F	17.638	11.295	28.933
141	MILLS CO RWD2-S	1F	13.011	5.595	18.606
142	MILLS CO RWD3	1F	15.130	7.951	23.081
159	CASS CO RWD 3-1	5F	16.917	7.228	24.145
160	CASS CO RWD 3-2	1F	16.349	7.692	24.041
161	CASS CO RWD3-3	5F	28.643	19.133	47.776
162	CASS CO RWD3-4	1F	34.991	30.963	65.955
245	CB EAST BELLEVUE	6B	141.850	69.371	211.220

TOTAL FOR BOOSTER STATIONS

CAPITAL COST:	885.446
O&M:	766.184
TOTAL:	1651.629

STORAGE FACILITIES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
300	ARLINGTON	216.066	11.527	227.593
303	HERMAN	85.342	8.490	93.832
304	KENNARD	81.862	7.943	89.805
305	WASHINGTON	64.160	3.698	67.858
306	DUNLAP	145.352	10.733	156.085
307	LITTLE SIOUX	93.179	8.776	101.955
308	LOGAN	74.502	13.032	87.534
309	MAGNOLIA	62.360	7.358	69.718
311	MODALE	134.559	7.801	142.360
312	MONDAMIN	120.052	8.708	128.759
313	PERSIA	128.399	9.075	137.474
314	PISGAH	.746	7.946	8.692
315	WOODBINE	223.032	12.200	235.232
316	AVOCA	.934	8.245	9.178
316	AVOCA-1	276.439	14.500	290.939
317	CARSON	169.475	9.842	179.317
318	CRESENT	71.876	8.460	80.336
319	HANCOCK	71.824	8.469	80.294
320	MACEDONIA	139.764	8.054	147.818
321	MCCLELAND	44.058	3.548	47.606
322	MINDEN	125.478	9.744	135.222
323	NEOLA	219.573	11.206	230.780
324	OAKLAND	2.986	11.633	14.618
324	OAKLAND-1	232.973	13.221	246.194
325	TREYNOR	228.992	12.551	241.543
326	UNDERWOOD	184.597	9.718	194.315
327	WALNUT	203.862	10.659	214.521
328	EMERSON	157.130	8.881	166.011
329	GLENWOOD	18.150	34.253	52.403
329	GLENWOOD-1	179.167	11.320	190.487
329	GLENWOOD-2	527.199	26.781	553.980
329	GLENWOOD-3	59.665	25.129	84.794
329	GLENWOOD-4	48.822	9.020	57.843
329	GLENWOOD-5	53.986	16.694	70.680
330	HASTINGS	60.958	7.633	68.591
331	HENDERSON	60.958	7.633	68.591
332	MALVERN	174.469	9.764	184.234
333	PACIFIC JUNCTION	57.871	4.140	62.011
334	SILVER CITY	56.093	7.483	63.576
335	TABOR	1.586	9.320	10.906
335	TABOR-1	150.124	8.690	158.814
336	ALVO	134.559	7.801	142.360
337	AVOCA	95.706	7.633	103.339
338	EAGLE	158.756	9.223	167.979
339	ELMWOOD	184.650	10.804	195.453
340	GREENWOOD	172.669	9.835	182.504
341	LOUISVILLE	125.991	9.615	135.606
343	MURDOCK	143.168	8.390	151.559
344	MURRAY	99.880	7.823	107.703
345	NEHAWKA	.922	8.318	9.240
347	UNION	109.619	8.245	117.864
348	WEEPING WATER	51.921	13.619	65.540
349	BLAIR B	48.450	38.639	87.090
350	MISSOURI VALLEY B	24.478	31.580	56.057
351	PLATTSMOUTH B	660.621	37.415	698.036
351	PLATTSMOUTH-1 B	111.624	31.664	143.288
352	FORT CALHOUN B	96.782	30.353	127.135
353	WASH CO RWD I	60.523	4.732	65.255
354	WASH CO RWD II	.648	4.291	4.940

354	WASH CO RWD-1 II	54.418	3.989	58.406
355	WASH CO RWD III	64.846	4.884	69.730
356	WASH CO RWD IV	77.815	5.325	83.140
357	WASH CO RWD V	54.038	4.509	58.547
358	WASH CO RWD VI	103.754	6.220	109.974
359	WASH CO RWD VII	110.238	6.444	116.682
360	WASH CO RWD VIII	29.004	11.268	40.272
361	HARR CO RWD I	114.561	6.589	121.150
361	HARR CO RWD-1 I	114.561	6.589	121.150
362	HARR CO RWD II	112.400	6.516	118.916
362	HARR CO RWD-1 II	112.400	6.516	118.916
363	HARR CO RWD III	90.784	5.772	96.557
363	HARR CO RWD-1 III	90.784	5.772	96.557
364	HARR CO RWD-2 III	90.784	5.772	96.557
364	HARR CO RWD IV	34.585	3.844	38.428
364	HARR CO RWD-1 IV	34.585	3.844	38.428
365	HARR CO RWD V	54.038	4.509	58.547
365	HARR CO RWD-1 V	54.038	4.509	58.547
366	HARR CO RWD VI	58.361	4.660	63.021
366	HARR CO RWD-2 VI	58.361	4.660	63.021
367	POTT CO RWD I	30.439	13.348	43.788
368	POTT CO RWD II	30.644	13.644	44.289
369	POTT CO RWD III	27.671	9.340	37.011
370	POTT CO RWD IV	27.056	8.445	35.501
371	POTT CO RWD V	28.953	11.196	40.149
372	POTT CO RWD VI	269.977	14.836	284.812
373	POTT CO RWD VII	28.953	11.196	40.149
374	POTT CO RWD VIII	26.697	7.925	34.622
375	MILL CO RWD I	25.057	5.549	30.606
375	MILL CO RWD-1 I	26.697	7.925	34.622
376	MILL CO RWD II	26.441	7.556	33.997
376	MILL CO RWD-1 II	25.262	5.845	31.107
376	MILL CO RWD-2 II	68.229	4.588	72.817
377	MILL CO RWD III	105.915	6.292	112.208
377	MILL CO RWD-1 III	105.915	6.292	112.208
377	MILL CO RWD-2 III	73.408	4.811	78.220
378	CASS CO RWD I	-.553	9.814	9.262
378	CASS CO RWD-1 I	-.819	12.899	12.080
379	CASS CO RWD II	106.140	8.095	114.235
380	CASS CO RWD III	56.200	4.588	60.788
380	CASS CO RWD-1 III	56.200	4.588	60.788
380	CASS CO RWD-2 III	58.361	4.660	63.021
381	OTOE CO RWD III	179.167	11.320	190.487
397	DEER CREEK	369.072	17.447	386.519
398	FLORENCE PREC	151.391	8.148	159.540
399	EAST BELLEVUE	396.539	18.195	414.734

TOTAL FOR STORAGE FACILITIES

CAPITAL COST:	11102.954
O&M:	1074.591
TOTAL:	12177.553

PIPELINES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
629	WASH CO RWD ALL	87.533	15.744	103.277
630	WASH CO RWD ALL	3176.940	571.516	3748.457
632	WASH CO RWD 7F	460.756	82.886	543.643
633	WASH CO RWD 7B	1829.087	332.230	2161.317
635	HARR CO RWD ALL	1184.789	213.136	1397.925
636	HARR CO RWD 1F	464.642	83.584	548.226
637	HARR CO RWD 1F	3270.449	588.340	3858.788
650	POTT CO RWD 1F	756.116	136.022	892.138
651	POTT CO RWD 1F	7842.536	1410.839	9253.374
655	MILLS CO RWD 1F	319.829	58.558	378.388
656	MILLS CO RWD 1F	6696.475	1204.666	7901.141
658	MILLS CO RWD 1F2	1318.248	241.348	1559.596
666	CASS CO RWD1 5F	-18.718	183.183	164.466
670	CASS CO RWD3 F	429.627	77.285	506.912
671	CASS CO RWD3 F	1854.180	333.560	2187.740
674	OTOE CO RWD III 5F	1186.611	209.884	1396.495
676	CASS CO RWD 4 5F	254.015	45.698	299.714
680	DEER CREEK 7B	354.313	63.740	418.052
681	FLORENCE PREC 7B	70.125	12.618	82.743
684	EAST BELLEVUE 6B	458.939	82.564	541.502
550	ARLINGTON	108.850	70.693	179.543
553	KENNARD	1.207	20.157	21.364
554	WASHINGTON	22.716	7.817	30.533
555	HERMAN	0.000	18.778	18.778
556	DUNLAP	47.585	84.455	132.040
557	LITTLE SIOUX	10.625	15.897	26.523
558	LOGAN	63.951	100.876	164.827
559	MAGNOLIA	0.000	12.154	12.154
561	MODALE	0.000	16.866	16.866
562	MODAMIN	0.000	23.867	23.867
563	PERSIA	0.000	18.429	18.429
564	PISGAH	6.278	18.062	24.341
565	WOODBINE	90.337	94.143	184.479
566	AVOCA	0.000	88.494	88.494
567	CARSON	35.225	50.527	85.752
568	CRESENT	36.080	22.248	58.328
569	HANCOCK	10.519	15.215	25.734
570	MACEDONIA	26.674	23.715	50.390
571	MCCLELLAND	1.192	8.913	10.105
572	MINDEN	22.781	29.321	52.102
573	NEOLA	63.372	67.241	130.613
574	OAKLAND	61.446	104.919	166.365
575	TREYNOR	233.840	62.701	296.541
576	UNDERWOOD	103.465	40.675	144.140
577	WALNUT	49.120	59.285	108.404
578	EMERSON	23.467	32.448	55.915
580	HASTINGS	0.000	9.914	9.914
581	HENDERSON	0.000	11.780	11.780
582	MALVERN	0.000	63.944	63.944
583	PACIFIC JUNCTION	0.000	27.951	27.951
584	SILVER CITY	0.000	14.286	14.286
585	TABOR	30.708	61.782	92.490
586	ALVO	0.000	8.438	8.438
587	AVOCA	10.481	15.272	25.753
588	EAGLE	89.105	39.542	128.647
589	ELMWOOD	55.934	41.039	96.973
590	GREENWOOD	96.046	44.449	140.495
591	LOUISVILLE	0.000	56.380	56.380
592	MANLEY	30.408	13.464	43.872

593	MURDOCK	13.085	17.637	30.721
594	MURRAY	9.901	18.604	28.505
595	NEHAWKA	24.047	21.388	45.435
597	UNION	0.000	15.248	15.248
598	WEEPING WATER	58.495	77.119	135.614
599	WATERLOO	31.872	31.728	63.600
609	FT CALHOUN B	958.453	175.180	1133.632
608	BLAIR B	3183.001	780.778	3963.779
610	MISSOURI VALLEY B	1095.512	350.732	1446.244
611	GLENWOOD B	943.043	361.692	1304.735
612	PLATTSMOUTH B	2303.770	667.166	2970.935
618	FLORENCE PREC B	338.069	50.701	388.770
619	DEER CREEK B	897.938	133.163	1031.101
620	EAST BELLEVUE B	1183.241	177.453	1360.694

TOTAL FOR PIPELINES

CAPITAL COST:	44368.331
O&M:	10342.127
TOTAL:	54710.457

GRAND TOTAL

CAPITAL COST:	103002.112
O&M:	29210.447
TOTAL:	132212.566

Scheme IB2

TREATMENT PLANTS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
001	BLAIR	1E	5941.985	2511.849	8453.834
007	MODALE	1F	1162.285	159.816	1322.101
008	PISGAH	1F	883.258	267.870	1151.127
009	MAGNOLIA	1F	1003.362	194.429	1197.791
010	DUNLAP	1F	1757.173	512.595	2269.768
011	MISSOURI VALLEY	1E	2557.152	1153.649	3710.800
015	HONEY CREEK	1F	1167.561	394.719	1562.280
016	NEOLA	1F	2102.784	717.537	2820.321
017	AVOCA	1F	1835.901	717.537	2553.438
018	WALNUT	1F	1185.033	409.969	1595.003
019	POTT RWD6	1F	1523.651	435.580	1959.231
020	OAKLAND	1F	1338.917	323.726	1662.643
021	CARSON	1F	806.329	229.802	1036.131
022	POTT RWD 7	1F	806.329	195.852	1002.182
023	HENDERSON	1F	1089.565	276.501	1366.066
024	MILLS RWD 3	1F	2222.513	583.262	2805.776
026	PACIFIC JUNCTION	1E2	5685.354	2575.431	8260.785
033	PLATTSMOUTH	1E2	3481.516	1246.096	4727.612
035	LOUISVILLE	1F	1485.407	405.058	1890.464
036	GREENWOOD	1F	594.136	163.848	757.984
037	NEHAWKA	1F	319.064	126.181	445.246
038	UNION	1F	257.727	104.738	362.465
039	WEEPING WATER	1F	914.400	190.436	1104.836

TOTAL FOR TREATMENT PLANTS

CAPITAL COST:	40121.402
O&M:	13896.481
TOTAL:	54017.884

BOOSTER STATIONS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
100	WASH CO RWD 4	7E	13.888	6.398	20.285
101	FT CALHOUN	7E	29.297	19.737	49.033
103	WASHINGTON	5F	13.522	4.983	18.505
104	SW WASH CO	5F	27.413	24.593	52.006
105	S WASH CO	5F	32.557	37.861	70.417
106	WASH CO RWD 8	5F	26.889	28.401	55.290
107	WASH CO RWD 7	5F	20.064	13.912	33.976
108	LOGAN	1F	22.828	12.907	35.735
109	HARRISON RWD 5	1F	11.281	3.850	15.132
110	PERSIA	5F	14.915	7.359	22.273
113	HARRISON RWD 1	5F	22.176	17.936	40.111
121	POTT CO RWD1	1F	21.499	17.343	38.842
122	POTT CO RWD2	1F	19.296	1.948	21.245
123	POTT CO RWD3	1F	23.459	21.971	45.430
124	POTT CO RWD4	1F	17.812	11.105	28.918
125	POTT CO RWD5	1F	20.064	14.776	34.840
126	POTT CO RWD6	1F	19.296	22.497	41.793
127	POTT CO RWD7	1F	15.755	8.728	24.482
128	POTT CO RWD8	1F	32.436	23.961	56.396
136	GLENWOOD	1E	153.522	242.311	395.833
138	MILLS CO RWD1-N	1F	15.130	7.997	23.127
139	MILLS CO RWD1-S	1F	10.954	3.673	14.627
140	MILLS CO RWD2-N	1F	17.638	11.295	28.933
141	MILLS CO RWD2-S	1F	13.011	5.595	18.606
142	MILLS CO RWD3	1F	15.130	7.951	23.081
159	CASS CO RWD 3-1	5F	16.917	7.228	24.145
160	CASS CO RWD 3-2	1F	16.349	7.692	24.041
161	CASS CO RWD3-3	5F	28.643	19.133	47.776
162	CASS CO RWD3-4	1F	34.991	30.963	65.955

TOTAL FOR BOOSTER STATIONS

CAPITAL COST:	726.732
O&M:	644.104
TOTAL:	1370.833

STORAGE FACILITIES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
300	ARLINGTON	216.066	11.527	227.593
301	BLAIR	32.827	37.527	70.354
302	FORT CALHOUN	89.342	19.113	108.455
303	HERMAN	85.342	8.490	93.832
304	KENNARD	81.862	7.943	89.805
305	WASHINGTON	64.160	3.698	67.858
306	DUNLAP	145.352	10.733	156.085
307	LITTLE SIOUX	93.179	8.776	101.955
308	LOGAN	74.502	13.032	87.534
309	MAGNOLIA	62.360	7.358	69.718
310	MISSOURI VALLEY	8.244	21.950	30.194
311	MODALE	134.559	7.801	142.360
312	MONDAMIN	120.052	8.708	128.759
313	PERSIA	128.399	9.075	137.474
314	PISGAH	.746	7.946	8.692
315	WOODBINE	223.032	12.200	235.232
316	AVOCA	.934	8.245	9.178
316	AVOCA-1	276.439	14.500	290.939
317	CARSON	169.475	9.842	179.317
318	CRESENT	71.876	8.460	80.336
319	HANCOCK	71.824	8.469	80.294
320	MACEDONIA	139.764	8.054	147.818
321	MCCLELAND	44.058	3.548	47.606
322	MINDEN	125.478	9.744	135.222
323	NEOLA	219.573	11.206	230.780
324	OAKLAND	2.986	11.633	14.618
324	OAKLAND-1	232.973	13.221	246.194
325	TREYNOR	228.992	12.551	241.543
326	UNDERWOOD	184.597	9.718	194.315
327	WALNUT	203.862	10.659	214.521
328	EMERSON	157.130	8.881	166.011
329	GLENWOOD	18.150	34.253	52.403
329	GLENWOOD-1	179.167	11.320	190.487
329	GLENWOOD-2	527.199	26.781	553.980
329	GLENWOOD-3	59.665	25.129	84.794
329	GLENWOOD-4	48.822	9.020	57.843
329	GLENWOOD-5	53.986	16.694	70.680
330	HASTINGS	60.958	7.633	68.591
331	HENDERSON	60.958	7.633	68.591
332	MALVERN	174.469	9.764	184.234
333	PACIFIC JUNCTION	57.871	4.140	62.011
334	SILVER CITY	56.093	7.483	63.576
335	TABOR	1.586	9.320	10.906
335	TABOR-1	150.124	8.690	158.814
336	ALVO	134.559	7.801	142.360
337	AVOCA	95.706	7.633	103.339
338	EAGLE	158.756	9.223	167.979
339	ELMWOOD	184.650	10.804	195.453
340	GREENWOOD	172.669	9.835	182.504
341	LOUISVILLE	125.991	9.615	135.606
343	MURDOCK	143.168	8.390	151.559
344	MURRAY	99.880	7.823	107.703
345	NEHAWKA	.922	8.318	9.240
346	PLATTSMOUTH	660.621	37.415	698.036
346	PLATTSMOUTH-1	111.786	31.671	143.457
347	UNION	109.619	8.245	117.864
348	WEEPING WATER	51.921	13.619	65.540
353	WASH CO RWD I	60.523	4.732	65.255
354	WASH CO RWD II	.648	4.291	4.940

354	WASH CO RWD-1 II	54.418	3.989	58.406
355	WASH CO RWD III	64.846	4.884	69.730
356	WASH CO RWD IV	77.815	5.325	83.140
357	WASH CO RWD V	54.038	4.509	58.547
358	WASH CO RWD VI	103.754	6.220	109.974
359	WASH CO RWD VII	110.238	6.444	116.682
360	WASH CO RWD VIII	29.004	11.268	40.272
361	HARR CO RWD I	114.561	6.589	121.150
361	HARR CO RWD-1 I	114.561	6.589	121.150
362	HARR CO RWD II	112.400	6.516	118.916
362	HARR CO RWD-1 II	112.400	6.516	118.916
363	HARR CO RWD III	90.784	5.772	96.557
363	HARR CO RWD-1 III	90.784	5.772	96.557
364	HARR CO RWD-2 III	90.784	5.772	96.557
364	HARR CO RWD IV	34.585	3.844	38.428
364	HARR CO RWD-1 IV	34.585	3.844	38.428
365	HARR CO RWD V	54.038	4.509	58.547
365	HARR CO RWD-1 V	54.038	4.509	58.547
366	HARR CO RWD VI	58.361	4.660	63.021
366	HARR CO RWD-2 VI	58.361	4.660	63.021
367	POTT CO RWD I	30.439	13.348	43.788
368	POTT CO RWD II	30.644	13.644	44.289
369	POTT CO RWD III	27.671	9.340	37.011
370	POTT CO RWD IV	27.056	8.445	35.501
371	POTT CO RWD V	28.953	11.196	40.149
372	POTT CO RWD VI	269.977	14.836	284.812
373	POTT CO RWD VII	28.953	11.196	40.149
374	POTT CO RWD VIII	26.697	7.925	34.622
375	MILL CO RWD I	25.057	5.549	30.606
375	MILL CO RWD-1 I	26.697	7.925	34.622
376	MILL CO RWD II	26.441	7.556	33.997
376	MILL CO RWD-1 II	25.262	5.845	31.107
376	MILL CO RWD-2 II	68.229	4.588	72.817
377	MILL CO RWD III	105.915	6.292	112.208
377	MILL CO RWD-1 III	105.915	6.292	112.208
377	MILL CO RWD-2 III	73.408	4.811	78.220
378	CASS CO RWD I	-.553	9.814	9.262
378	CASS CO RWD-1 I	-.819	12.899	12.080
379	CASS CO RWD II	106.140	8.095	114.235
380	CASS CO RWD III	56.200	4.588	60.788
380	CASS CO RWD-1 III	56.200	4.588	60.788
380	CASS CO RWD-2 III	58.361	4.660	63.021
381	OTOE CO RWD III	179.167	11.320	190.487

TOTAL FOR STORAGE FACILITIES

CAPITAL COST:	10146.817
O&M:	1008.826
TOTAL:	11155.650

PIPELINES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
629	WASH CO RWD ALL	87.533	15.744	103.277
630	WASH CO RWD ALL	3176.940	571.516	3748.457
631	WASH CO RWD 7E	1216.398	220.942	1437.340
632	WASH CO RWD 7F	460.756	82.886	543.643
635	HARR CO RWD ALL	1184.789	213.136	1397.925
636	HARR CO RWD 1F	464.642	83.584	548.226
637	HARR CO RWD 1F	3270.449	588.340	3858.788
650	POTT CO RWD 1F	756.116	136.022	892.138
651	POTT CO RWD 1F	7842.536	1410.839	9253.374
655	MILLS CO RWD 1F	319.829	58.558	378.388
656	MILLS CO RWD 1F	6696.475	1204.666	7901.141
658	MILLS CO RWD 1F2	1318.248	241.348	1559.596
666	CASS CO RWD1 5F	-18.718	183.183	164.466
670	CASS CO RWD3 F	429.627	77.285	506.912
671	CASS CO RWD3 F	1854.180	333.560	2187.740
674	OTOE CO RWD III 5F	1186.611	209.884	1396.495
676	CASS CO RWD 4 5F	254.015	45.698	299.714
550	ARLINGTON	108.850	70.693	179.543
551	BLAIR	821.238	487.566	1308.804
552	FT. CALHOUN	185.071	65.803	250.873
553	KENNARD	1.207	20.157	21.364
554	WASHINGTON	22.716	7.817	30.533
555	HERMAN	0.000	18.778	18.778
556	DUNLAP	47.585	84.455	132.040
557	LITTLE SIOUX	10.625	15.897	26.523
558	LOGAN	63.951	100.876	164.827
559	MAGNOLIA	0.000	12.154	12.154
560	MISSOURI VALLEY	114.738	227.426	342.165
561	MODALE	0.000	16.866	16.866
562	MODAMIN	0.000	23.867	23.867
563	PERSIA	0.000	18.429	18.429
564	PISGAH	6.278	18.062	24.341
565	WOODBINE	90.337	94.143	184.479
566	AVOCA	0.000	88.494	88.494
567	CARSON	35.225	50.527	85.752
568	CRESENT	36.080	22.248	58.328
569	HANCOCK	10.519	15.215	25.734
570	MACEDONIA	26.674	23.715	50.390
571	MCCLELLAND	1.192	8.913	10.105
572	MINDEN	22.781	29.321	52.102
573	NEOLA	63.372	67.241	130.613
574	OAKLAND	61.446	104.919	166.365
575	TREYNOR	233.840	62.701	296.541
576	UNDERWOOD	103.465	40.675	144.140
577	WALNUT	49.120	59.285	108.404
578	EMERSON	23.467	32.448	55.915
579	GLENWOOD	653.324	360.395	1013.719
580	HASTINGS	0.000	9.914	9.914
581	HENDERSON	0.000	11.780	11.780
582	MALVERN	0.000	63.944	63.944
583	PACIFIC JUNCTION	0.000	27.951	27.951
584	SILVER CITY	0.000	14.286	14.286
585	TABOR	30.708	61.782	92.490
586	ALVO	0.000	8.438	8.438
587	AVOCA	10.481	15.272	25.753
588	EAGLE	89.105	39.542	128.647
589	ELMWOOD	55.934	41.039	96.973
590	GREENWOOD	96.046	44.449	140.495
591	LOUISVILLE	0.000	56.380	56.380

592	MANLEY	30.408	13.464	43.872
593	MURDOCK	13.085	17.637	30.721
594	MURRAY	9.901	18.604	28.505
595	NEHAWKA	24.047	21.388	45.435
596	PLATTSMOUTH	330.290	430.556	760.846
597	UNION	0.000	15.248	15.248
598	WEEPING WATER	58.495	77.119	135.614
599	WATERLOO	31.872	31.728	63.600

TOTAL FOR PIPELINES

CAPITAL COST:	34073.899
O&M:	8946.798
TOTAL:	43020.700

GRAND TOTAL

CAPITAL COST:	85068.850
O&M:	24496.209
TOTAL:	109565.067

Scheme IIE

TREATMENT PLANTS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
004	BLAIR	2B	7355.956	3283.831	10639.788
014	MODAMIN	2B	4132.094	2178.467	6310.560
030	PACIFIC JUNCTION	2B	6261.765	3061.961	9323.726
089	PLATTSMOUTH	2B	2398.209	2081.504	4479.713
090	LOUISVILLE	2F	1464.872	461.951	1926.823
SH4	PLATTSMOUTH SLUD HAN		911.381	0.000	911.381

TOTAL FOR TREATMENT PLANTS

CAPITAL COST:	18499.516
O&M:	8929.720
TOTAL:	27429.236

BOOSTER STATIONS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
103	WASHINGTON	5F	13.522	4.983	18.505
104	SW WASH CO	5F	27.413	24.593	52.006
105	S WASH CO	5F	32.557	37.861	70.417
106	WASH CO RWD 8	5F	26.889	28.401	55.290
107	WASH CO RWD 7	5F	20.064	13.912	33.976
110	PERSIA	5F	14.915	7.359	22.273
112	MO VALLEY	2B	125.983	156.052	282.035
113	HARRISON RWD 1	5F	22.176	17.936	40.111
114	MAGNOLIA	2F	32.557	35.100	67.657
115	LITTLE SIOUX	2F	36.915	44.042	80.958
116	PISGAH	2F	36.167	42.521	78.688
129	CARSON	8F	24.664	23.477	48.141
130	OAKLAND	8F	24.071	21.457	45.528
131	AVOCA	8F	28.920	32.327	61.247
132	MCCLELLAND	8F	52.772	110.919	163.692
133	NEOLA	8F	56.493	101.869	158.362
134	WESTON	8F	22.176	19.838	42.014
135	HONEY CREEK	8F	20.064	13.921	33.984
143	EMERSON	8F	21.499	15.763	37.262
144	HENDERSON	8F	14.006	5.914	19.921
145	NW MILLS CO	8F	18.490	12.190	30.680
146	SW MILLS CO	8F	18.490	12.190	30.680
147	GLENWOOD EAST	2F	41.425	64.739	106.164
150	GLENWOOD	2B	178.501	314.065	492.566
156	CASS CO RWD1-1	5F	11.180	20.347	31.528
157	CASS CO RWD1-2	5F	10.602	16.458	27.061
158	OTOE CO RWD3	5F	28.068	11.804	39.872
159	CASS CO RWD 3-1	5F	16.917	7.228	24.145
161	CASS CO RWD3-3	5F	28.643	19.133	47.776
163	CASS CO RWD3-2	8F	27.221	17.519	44.740
164	CASS CO RWD 3-4	8F	39.490	39.828	79.318
245	CB EAST BELLEVUE	6B	141.850	69.371	211.220
246	CB POT RURAL	8F	311.956	256.305	568.260
250	OTOE CO RWD3	8F	95.493	35.693	131.186
251	CASS CO RWD1-1	8F	60.892	31.122	92.014
252	CASS CO RWD1-2	8F	59.941	27.200	87.141

TOTAL FOR BOOSTER STATIONS

CAPITAL COST:	1742.982
O&M:	1713.437
TOTAL:	3456.418

STORAGE FACILITIES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
300	ARLINGTON	216.066	11.527	227.593
303	HERMAN	85.342	8.490	93.832
304	KENNARD	81.862	7.943	89.805
305	WASHINGTON	64.160	3.698	67.858
306	DUNLAP	145.352	10.733	156.085
307	LITTLE SIOUX	93.179	8.776	101.955
308	LOGAN	74.502	13.032	87.534
309	MAGNOLIA	62.360	7.358	69.718
311	MODALE	134.559	7.801	142.360
312	MONDAMIN	120.052	8.708	128.759
313	PERSIA	128.399	9.075	137.474
314	PISGAH	.746	7.946	8.692
315	WOODBINE	223.032	12.200	235.232
316	AVOCA	.934	8.245	9.178
316	AVOCA-1	276.439	14.500	290.939
317	CARSON	169.475	9.842	179.317
318	CRESENT	71.876	8.460	80.336
319	HANCOCK	71.824	8.469	80.294
320	MACEDONIA	139.764	8.054	147.818
321	MCCLELAND	44.058	3.548	47.606
322	MINDEN	125.478	9.744	135.222
323	NEOLA	219.573	11.206	230.780
324	OAKLAND	2.986	11.633	14.618
324	OAKLAND-1	232.973	13.221	246.194
325	TREYNOR	228.992	12.551	241.543
326	UNDERWOOD	184.597	9.718	194.315
327	WALNUT	203.862	10.659	214.521
328	EMERSON	157.130	8.881	166.011
329	GLENWOOD	18.150	34.253	52.403
329	GLENWOOD-1	179.167	11.320	190.487
329	GLENWOOD-2	527.199	26.781	553.980
329	GLENWOOD-3	59.665	25.129	84.794
329	GLENWOOD-4	48.822	9.020	57.843
329	GLENWOOD-5	53.986	16.694	70.680
330	HASTINGS	60.958	7.633	68.591
331	HENDERSON	60.958	7.633	68.591
332	MALVERN	174.469	9.764	184.234
333	PACIFIC JUNCTION	57.871	4.140	62.011
334	SILVER CITY	56.093	7.483	63.576
335	TABOR	1.586	9.320	10.906
335	TABOR-1	150.124	8.690	158.814
336	ALVO	134.559	7.801	142.360
337	AVOCA	95.706	7.633	103.339
338	EAGLE	158.756	9.223	167.979
339	ELMWOOD	184.650	10.804	195.453
340	GREENWOOD	172.669	9.835	182.504
341	LOUISVILLE	125.991	9.615	135.606
343	MURDOCK	143.168	8.390	151.559
344	MURRAY	99.880	7.823	107.703
345	NEHAWKA	.922	8.318	9.240
347	UNION	109.619	8.245	117.864
348	WEEPING WATER	51.921	13.619	65.540
349	BLAIR B	48.450	38.639	87.090
350	MISSOURI VALLEY B	24.478	31.580	56.057
351	PLATTSMOUTH B	660.621	37.415	698.036
351	PLATTSMOUTH-1 B	111.624	31.664	143.288
352	FORT CALHOUN B	96.782	30.353	127.135
353	WASH CO RWD I	60.523	4.732	65.255
354	WASH CO RWD II	.648	4.291	4.940

354	WASH CO RWD-1 II	54.418	3.989	58.406
355	WASH CO RWD III	64.846	4.884	69.730
357	WASH CO RWD V	54.038	4.509	58.547
358	WASH CO RWD VI	103.754	6.220	109.974
359	WASH CO RWD VII	110.238	6.444	116.682
360	WASH CO RWD VIII	29.004	11.268	40.272
361	HARR CO RWD I	114.561	6.589	121.150
361	HARR CO RWD-1 I	114.561	6.589	121.150
362	HARR CO RWD II	112.400	6.516	118.916
362	HARR CO RWD-1 II	112.400	6.516	118.916
363	HARR CO RWD III	90.784	5.772	96.557
363	HARR CO RWD-1 III	90.784	5.772	96.557
364	HARR CO RWD-2 III	90.784	5.772	96.557
364	HARR CO RWD IV	34.585	3.844	38.428
364	HARR CO RWD-1 IV	34.585	3.844	38.428
365	HARR CO RWD V	54.038	4.509	58.547
365	HARR CO RWD-1 V	54.038	4.509	58.547
366	HARR CO RWD VI	58.361	4.660	63.021
366	HARR CO RWD-2 VI	58.361	4.660	63.021
367	POTT CO RWD I	30.439	13.348	43.788
368	POTT CO RWD II	30.644	13.644	44.289
369	POTT CO RWD III	27.671	9.340	37.011
370	POTT CO RWD IV	27.056	8.445	35.501
371	POTT CO RWD V	28.953	11.196	40.149
372	POTT CO RWD VI	269.977	14.836	284.812
373	POTT CO RWD VII	28.953	11.196	40.149
374	POTT CO RWD VIII	26.697	7.925	34.622
375	MILL CO RWD I	25.057	5.549	30.606
375	MILL CO RWD-1 I	26.697	7.925	34.622
376	MILL CO RWD II	26.441	7.556	33.997
376	MILL CO RWD-1 II	25.262	5.845	31.107
376	MILL CO RWD-2 II	68.229	4.588	72.817
377	MILL CO RWD III	105.915	6.292	112.208
377	MILL CO RWD-1 III	105.915	6.292	112.208
377	MILL CO RWD-2 III	73.408	4.811	78.220
378	CASS CO RWD I	-.553	9.814	9.262
378	CASS CO RWD-1 I	-.819	12.899	12.080
379	CASS CO RWD II	106.140	8.095	114.235
380	CASS CO RWD III	56.200	4.588	60.788
380	CASS CO RWD-1 III	56.200	4.588	60.788
380	CASS CO RWD-2 III	58.361	4.660	63.021
381	OTOE CO RWD III	179.167	11.320	190.487
397	DEER CREEK	369.072	17.447	386.519
398	FLORENCE PREC	151.391	8.148	159.540
399	EAST BELLEVUE	396.539	18.195	414.734

TOTAL FOR STORAGE FACILITIES

CAPITAL COST:	11025.139
O&M:	1069.266
TOTAL:	12094.413

PIPELINES

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
629	WASH CO RWD ALL		87.533	15.744	103.277
630	WASH CO RWD ALL		3176.940	571.516	3748.457
634	WASH CO RWD 2F		495.330	89.106	584.436
635	HARR CO RWD ALL		1184.789	213.136	1397.925
638	HARR CO RWD 2F		965.758	173.737	1139.495
639	HARR CO RWD 2F		3329.885	599.029	3928.914
642	HARR CO RWD 2B		1307.648	239.403	1547.051
643	HARR CO RWD 2B		2070.058	378.982	2449.040
652	POTT CO RWD 2F		444.527	79.971	524.497
653	POTT CO RWD 8F		2874.495	517.110	3391.605
654	POTT CO RWD 8F		9276.169	1668.746	10944.915
659	MILLS CO RWD 2F		1671.891	306.083	1977.974
660	MILLS CO RWD 2F		306.281	55.097	361.378
661	MILLS CO RWD 2F		6023.959	1083.684	7107.642
666	CASS CO RWD1 5F		-18.718	183.183	164.466
670	CASS CO RWD3 F		429.627	77.285	506.912
671	CASS CO RWD3 F		1854.180	333.560	2187.740
674	OTOE CO RWD III 5F		1186.611	209.884	1396.495
676	CASS CO RWD 4 5F		254.015	45.698	299.714
677	CASS CO RWD4 8F		30.748	5.529	36.277
678	CASS CO RWD 8F		167.367	30.106	197.473
682	DEER CREEK 2B		466.499	83.920	550.418
683	FLORENCE PREC 2B		25.500	4.588	30.088
684	EAST BELLEVUE 6B		458.939	82.564	541.502
723	TO NEHAWKA	8F	35.949	6.470	42.419
729	TO UNION	8F	27.230	4.897	32.126
730	TO WPNG WATER	8F	85.823	15.637	101.460
731	OTOE CO RWD3	8F	224.883	40.982	265.865
732	OTOE CO RWD3	8F	3472.257	632.814	4105.071
AC4	PAPIO NRD ALT 4		651.427	244.287	895.714
550	ARLINGTON		108.850	70.693	179.543
553	KENNARD		1.207	20.157	21.364
554	WASHINGTON		22.716	7.817	30.533
555	HERMAN		0.000	18.778	18.778
556	DUNLAP		47.585	84.455	132.040
557	LITTLE SIOUX		10.625	15.897	26.523
558	LOGAN		63.951	100.876	164.827
559	MAGNOLIA		0.000	12.154	12.154
561	MODALE		0.000	16.866	16.866
562	MODAMIN		0.000	23.867	23.867
563	PERSIA		0.000	18.429	18.429
564	PISGAH		6.278	18.062	24.341
565	WOODBINE		90.337	94.143	184.479
566	AVOCA		0.000	88.494	88.494
567	CARSON		35.225	50.527	85.752
568	CRESENT		36.080	22.248	58.328
569	HANCOCK		10.519	15.215	25.734
570	MACEDONIA		26.674	23.715	50.390
571	MCCLELLAND		1.192	8.913	10.105
572	MINDEN		22.781	29.321	52.102
573	NEOLA		63.372	67.241	130.613
574	OAKLAND		61.446	104.919	166.365
575	TREYNOR		233.840	62.701	296.541
576	UNDERWOOD		103.465	40.675	144.140
577	WALNUT		49.120	59.285	108.404
578	EMERSON		23.467	32.448	55.915
580	HASTINGS		0.000	9.914	9.914
581	HENDERSON		0.000	11.780	11.780
582	MALVERN		0.000	63.944	63.944

583	PACIFIC JUNCTION	0.000	27.951	27.951
584	SILVER CITY	0.000	14.286	14.286
585	TABOR	30.708	61.782	92.490
586	ALVO	0.000	8.438	8.438
587	AVOCA	10.481	15.272	25.753
588	EAGLE	89.105	39.542	128.647
589	ELMWOOD	55.934	41.039	96.973
590	GREENWOOD	96.046	44.449	140.495
591	LOUISVILLE	0.000	56.380	56.380
592	MANLEY	30.408	13.464	43.872
593	MURDOCK	13.085	17.637	30.721
594	MURRAY	9.901	18.604	28.505
595	NEHAWKA	24.047	21.388	45.435
597	UNION	0.000	15.248	15.248
598	WEEPING WATER	58.495	77.119	135.614
599	WATERLOO	31.872	31.728	63.600
609	FT CALHOUN B	958.453	175.180	1133.632
608	BLAIR B	3183.001	780.778	3963.779
610	MISSOURI VALLEY B	1095.512	350.732	1446.244
611	GLENWOOD B	943.043	361.692	1304.735
612	PLATTSMOUTH B	2303.770	667.166	2970.935
618	FLORENCE PREC B	338.069	50.701	388.770
619	DEER CREEK B	897.938	133.163	1031.101
620	EAST BELLEVUE B	1183.241	177.453	1360.694

TOTAL FOR PIPELINES

CAPITAL COST:	54939.439
O&M:	12387.474
TOTAL:	67326.909

GRAND TOTAL

CAPITAL COST:	74968.421
O&M:	22522.707
TOTAL:	97491.128

Scheme IIB

TREATMENT PLANTS

ID	TITLE		PRESENT WORTH	
		CAPITAL COST	O&M	TOTAL
003	BLAIR 2E	5807.619	2406.920	8214.539
013	MODAMIN 2E	3619.728	1770.025	5389.754
029	PACIFIC JUNCTION 2E	6236.733	3111.645	9348.378
088	PLATTSMOUTH 2E	459.183	1179.179	1638.362
090	LOUISVILLE 2F	1464.872	461.951	1926.823
SH4	PLATTSMOUTH SLUD HAN	911.381	0.000	911.381

TOTAL FOR TREATMENT PLANTS

CAPITAL COST:	22524.277
O&M:	11067.714
TOTAL:	33591.991

BOOSTER STATIONS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
103	WASHINGTON	5F	13.522	4.983	18.505
104	SW WASH CO	5F	27.413	24.593	52.006
105	S WASH CO	5F	32.557	37.861	70.417
106	WASH CO RWD 8	5F	26.889	28.401	55.290
107	WASH CO RWD 7	5F	20.064	13.912	33.976
110	PERSIA	5F	14.915	7.359	22.273
111	MO VALLEY	2E	91.754	97.408	189.163
113	HARRISON RWD 1	5F	22.176	17.936	40.111
114	MAGNOLIA	2F	32.557	35.100	67.657
115	LITTLE SIOUX	2F	36.915	44.042	80.958
116	PISGAH	2F	36.167	42.521	78.688
129	CARSON	8F	24.664	23.477	48.141
130	OAKLAND	8F	24.071	21.457	45.528
131	AVOCA	8F	28.920	32.327	61.247
132	MCCLELLAND	8F	52.772	110.919	163.692
133	NEOLA	8F	56.493	101.869	158.362
134	WESTON	8F	22.176	19.838	42.014
135	HONEY CREEK	8F	20.064	13.921	33.984
143	EMERSON	8F	21.499	15.763	37.262
144	HENDERSON	8F	14.006	5.914	19.921
145	NW MILLS CO	8F	18.490	12.190	30.680
146	SW MILLS CO	8F	18.490	12.190	30.680
147	GLENWOOD EAST	2F	41.425	64.739	106.164
149	GLENWOOD	2E	171.993	291.037	463.031
156	CASS CO RWD1-1	5F	11.180	20.347	31.528
157	CASS CO RWD1-2	5F	10.602	16.458	27.061
158	OTOE CO RWD3	5F	28.068	11.804	39.872
159	CASS CO RWD 3-1	5F	16.917	7.228	24.145
161	CASS CO RWD3-3	5F	28.643	19.133	47.776
163	CASS CO RWD3-2	8F	27.221	17.519	44.740
164	CASS CO RWD 3-4	8F	39.490	39.828	79.318
246	CB POT RURAL	8F	311.956	256.305	568.260
250	OTOE CO RWD3	8F	95.493	35.693	131.186
251	CASS CO RWD1-1	8F	60.892	31.122	92.014
252	CASS CO RWD1-2	8F	59.941	27.200	87.141

TOTAL FOR BOOSTER STATIONS

CAPITAL COST:	1560.395
O&M:	1562.394
TOTAL:	3122.791

STORAGE FACILITIES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
300	ARLINGTON	216.066	11.527	227.593
301	BLAIR	32.827	37.527	70.354
302	FORT CALHOUN	89.342	19.113	108.455
303	HERMAN	85.342	8.490	93.832
304	KENNARD	81.862	7.943	89.805
305	WASHINGTON	64.160	3.698	67.858
306	DUNLAP	145.352	10.733	156.085
307	LITTLE SIOUX	93.179	8.776	101.955
308	LOGAN	74.502	13.032	87.534
309	MAGNOLIA	62.360	7.358	69.718
310	MISSOURI VALLEY	8.244	21.950	30.194
311	MODALE	134.559	7.801	142.360
312	MONDAMIN	120.052	8.708	128.759
313	PERSIA	128.399	9.075	137.474
314	PISGAH	.746	7.946	8.692
315	WOODBINE	223.032	12.200	235.232
316	AVOCA	.934	8.245	9.178
316	AVOCA-1	276.439	14.500	290.939
317	CARSON	169.475	9.842	179.317
318	CRESENT	71.876	8.460	80.336
319	HANCOCK	71.824	8.469	80.294
320	MACEDONIA	139.764	8.054	147.818
321	MCCLELAND	44.058	3.548	47.606
322	MINDEN	125.478	9.744	135.222
323	NEOLA	219.573	11.206	230.780
324	OAKLAND	2.986	11.633	14.618
324	OAKLAND-1	232.973	13.221	246.194
325	TREYNOR	228.992	12.551	241.543
326	UNDERWOOD	184.597	9.718	194.315
327	WALNUT	203.862	10.659	214.521
328	EMERSON	157.130	8.881	166.011
329	GLENWOOD	18.150	34.253	52.403
329	GLENWOOD-1	179.167	11.320	190.487
329	GLENWOOD-2	527.199	26.781	553.980
329	GLENWOOD-3	59.665	25.129	84.794
329	GLENWOOD-4	48.822	9.020	57.843
329	GLENWOOD-5	53.986	16.694	70.680
330	HASTINGS	60.958	7.633	68.591
331	HENDERSON	60.958	7.633	68.591
332	MALVERN	174.469	9.764	184.234
333	PACIFIC JUNCTION	57.871	4.140	62.011
334	SILVER CITY	56.093	7.483	63.576
335	TABOR	1.586	9.320	10.906
335	TABOR-1	150.124	8.690	158.814
336	ALVO	134.559	7.801	142.360
337	AVOCA	95.706	7.633	103.339
338	EAGLE	158.756	9.223	167.979
339	ELMWOOD	184.650	10.804	195.453
340	GREENWOOD	172.669	9.835	182.504
341	LOUISVILLE	125.991	9.615	135.606
343	MURDOCK	143.168	8.390	151.559
344	MURRAY	99.880	7.823	107.703
345	NEHAWKA	.922	8.318	9.240
346	PLATTSMOUTH	660.621	37.415	698.036
346	PLATTSMOUTH-1	111.786	31.671	143.457
347	UNION	109.619	8.245	117.864
348	WEEPING WATER	51.921	13.619	65.540
353	WASH CO RWD I	60.523	4.732	65.255
354	WASH CO RWD II	.648	4.291	4.940

354	WASH CO RWD-1 II	54.418	3.989	58.406
355	WASH CO RWD III	64.846	4.884	69.730
357	WASH CO RWD V	54.038	4.509	58.547
358	WASH CO RWD VI	103.754	6.220	109.974
359	WASH CO RWD VII	110.238	6.444	116.682
360	WASH CO RWD VIII	29.004	11.268	40.272
361	HARR CO RWD I	114.561	6.589	121.150
361	HARR CO RWD-1 I	114.561	6.589	121.150
362	HARR CO RWD II	112.400	6.516	118.916
362	HARR CO RWD-1 II	112.400	6.516	118.916
363	HARR CO RWD III	90.784	5.772	96.557
363	HARR CO RWD-1 III	90.784	5.772	96.557
364	HARR CO RWD-2 III	90.784	5.772	96.557
364	HARR CO RWD IV	34.585	3.844	38.428
364	HARR CO RWD-1 IV	34.585	3.844	38.428
365	HARR CO RWD V	54.038	4.509	58.547
365	HARR CO RWD-1 V	54.038	4.509	58.547
366	HARR CO RWD VI	58.361	4.660	63.021
366	HARR CO RWD-2 VI	58.361	4.660	63.021
367	POTT CO RWD I	30.439	13.348	43.788
368	POTT CO RWD II	30.644	13.644	44.289
369	POTT CO RWD III	27.671	9.340	37.011
370	POTT CO RWD IV	27.056	8.445	35.501
371	POTT CO RWD V	28.953	11.196	40.149
372	POTT CO RWD VI	269.977	14.836	284.812
373	POTT CO RWD VII	28.953	11.196	40.149
374	POTT CO RWD VIII	26.697	7.925	34.622
375	MILL CO RWD I	25.057	5.549	30.606
375	MILL CO RWD-1 I	26.697	7.925	34.622
376	MILL CO RWD II	26.441	7.556	33.997
376	MILL CO RWD-1 II	25.262	5.845	31.107
376	MILL CO RWD-2 II	68.229	4.588	72.817
377	MILL CO RWD III	105.915	6.292	112.208
377	MILL CO RWD-1 III	105.915	6.292	112.208
377	MILL CO RWD-2 III	73.408	4.811	78.220
378	CASS CO RWD I	-.553	9.814	9.262
378	CASS CO RWD-1 I	-.819	12.899	12.080
379	CASS CO RWD II	106.140	8.095	114.235
380	CASS CO RWD III	56.200	4.588	60.788
380	CASS CO RWD-1 III	56.200	4.588	60.788
380	CASS CO RWD-2 III	58.361	4.660	63.021
381	OTOE CO RWD III	179.167	11.320	190.487

TOTAL FOR STORAGE FACILITIES

CAPITAL COST:	10069.002
O&M:	1003.501
TOTAL:	11072.510

PIPELINES

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
629	WASH CO RWD ALL		87.533	15.744	103.277
630	WASH CO RWD ALL		3176.940	571.516	3748.457
634	WASH CO RWD 2F		495.330	89.106	584.436
635	HARR CO RWD ALL		1184.789	213.136	1397.925
638	HARR CO RWD 2F		965.758	173.737	1139.495
639	HARR CO RWD 2F		3329.885	599.029	3928.914
640	HARR CO RWD 2E		1096.297	200.709	1297.006
641	HARR CO RWD 2E		1930.782	353.485	2284.267
652	POTT CO RWD 2F		444.527	79.971	524.497
653	POTT CO RWD 8F		2874.495	517.110	3391.605
654	POTT CO RWD 8F		9276.169	1668.746	10944.915
659	MILLS CO RWD 2F		1671.891	306.083	1977.974
660	MILLS CO RWD 2F		306.281	55.097	361.378
661	MILLS CO RWD 2F		6023.959	1083.684	7107.642
666	CASS CO RWD1 5F		-18.718	183.183	164.466
670	CASS CO RWD3 F		429.627	77.285	506.912
671	CASS CO RWD3 F		1854.180	333.560	2187.740
674	OTOE CO RWD III 5F		1186.611	209.884	1396.495
676	CASS CO RWD 4 5F		254.015	45.698	299.714
677	CASS CO RWD4 8F		30.748	5.529	36.277
678	CASS CO RWD 8F		167.367	30.106	197.473
728	TO NEHAWKA	8F	35.949	6.470	42.419
729	TO UNION	8F	27.230	4.897	32.126
730	TO WPNG WATER	8F	85.823	15.637	101.460
731	OTOE CO RWD3	8F	224.883	40.982	265.865
732	OTOE CO RWD3	8F	3472.257	632.814	4105.071
AC4	PAPIO NRD ALT 4		651.427	244.287	895.714
550	ARLINGTON		108.850	70.693	179.543
551	BLAIR		821.238	487.566	1308.804
552	FT. CALHOUN		185.071	65.803	250.873
553	KENNARD		1.207	20.157	21.364
554	WASHINGTON		22.716	7.817	30.533
555	HERMAN		0.000	18.778	18.778
556	DUNLAP		47.585	84.455	132.040
557	LITTLE SIOUX		10.625	15.897	26.523
558	LOGAN		63.951	100.876	164.827
559	MAGNOLIA		0.000	12.154	12.154
560	MISSOURI VALLEY		114.738	227.426	342.165
561	MODALE		0.000	16.866	16.866
562	MODAMIN		0.000	23.867	23.867
563	PERSIA		0.000	18.429	18.429
564	PISGAH		6.278	18.062	24.341
565	WOODBINE		90.337	94.143	184.479
566	AVOCA		0.000	88.494	88.494
567	CARSON		35.225	50.527	85.752
568	CRESENT		36.080	22.248	58.328
569	HANCOCK		10.519	15.215	25.734
570	MACEDONIA		26.674	23.715	50.390
571	MCCLELLAND		1.192	8.913	10.105
572	MINDEN		22.781	29.321	52.102
573	NEOLA		63.372	67.241	130.613
574	OAKLAND		61.446	104.919	166.365
575	TREYNOR		233.840	62.701	296.541
576	UNDERWOOD		103.465	40.675	144.140
577	WALNUT		49.120	59.285	108.404
578	EMERSON		23.467	32.448	55.915
579	GLENWOOD		653.324	360.395	1013.719
580	HASTINGS		0.000	9.914	9.914
581	HENDERSON		0.000	11.780	11.780

582	MALVERN	0.000	63.944	63.944
583	PACIFIC JUNCTION	0.000	27.951	27.951
584	SILVER CITY	0.000	14.286	14.286
585	TABOR	30.708	61.782	92.490
586	ALVO	0.000	8.438	8.438
587	AVOCA	10.481	15.272	25.753
588	EAGLE	89.105	39.542	128.647
589	ELMWOOD	55.934	41.039	96.973
590	GREENWOOD	96.046	44.449	140.495
591	LOUISVILLE	0.000	56.380	56.380
592	MANLEY	30.408	13.464	43.872
593	MURDOCK	13.085	17.637	30.721
594	MURRAY	9.901	18.604	28.505
595	NEHAWKA	24.047	21.388	45.435
596	PLATTSMOUTH	330.290	430.556	760.846
597	UNION	0.000	15.248	15.248
598	WEEPING WATER	58.495	77.119	135.614
599	WATERLOO	31.872	31.728	63.600

TOTAL FOR PIPELINES

CAPITAL COST:	44839.508
O&M:	11027.092
TOTAL:	55866.600

GRAND TOTAL

CAPITAL COST:	90231.837
O&M:	26237.891
TOTAL:	116469.728

Scheme IIIE

TREATMENT PLANTS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
006	BLAIR	3B	11062.513	5032.102	16094.615

TOTAL FOR TREATMENT PLANTS
CAPITAL COST: 11062.513
O&M: 5032.102
TOTAL: 16094.615

BOOSTER STATIONS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
102	FT CALHOUN	7B	52.230	65.188	117.418
103	WASHINGTON	5F	13.522	4.983	18.505
104	SW WASH CO	5F	27.413	24.593	52.006
105	S WASH CO	5F	32.557	37.861	70.417
106	WASH CO RWD 8	5F	26.889	28.401	55.290
107	WASH CO RWD 7	5F	20.064	13.912	33.976
110	PERSIA	5F	14.915	7.359	22.273
113	HARRISON RWD 1	5F	22.176	17.936	40.111
117	WOODBINE	3F	28.920	28.191	57.111
118	LOGAN	3F	27.413	27.251	54.664
120	MO VALLEY	3B	145.678	200.394	346.071
129	CARSON	8F	24.664	23.477	48.141
130	OAKLAND	8F	24.071	21.457	45.528
131	AVOCA	8F	28.920	32.327	61.247
132	MCCLELLAND	8F	52.772	110.919	163.692
133	NEOLA	8F	56.493	101.869	158.362
134	WESTON	8F	22.176	19.838	42.014
135	HONEY CREEK	8F	20.064	13.921	33.984
143	EMERSON	8F	21.499	15.763	37.262
144	HENDERSON	8F	14.006	5.914	19.921
145	NW MILLS CO	8F	18.490	12.190	30.680
146	SW MILLS CO	8F	18.490	12.190	30.680
151	SILVER CITY	3F	19.453	13.363	32.816
152	NORTH MILLS CO	3F	26.354	25.763	52.117
153	GLENWOOD EAST	3F	39.301	45.150	84.451
155	GLENWOOD	3B	173.582	294.418	467.999
156	CASS CO RWD1-1	5F	11.180	20.347	31.528
157	CASS CO RWD1-2	5F	10.602	16.458	27.061
158	OTOE CO RWD3	5F	28.068	11.804	39.872
159	CASS CO RWD 3-1	5F	16.917	7.228	24.145
161	CASS CO RWD3-3	5F	28.643	19.133	47.776
163	CASS CO RWD3-2	8F	27.221	17.519	44.740
164	CASS CO RWD 3-4	8F	39.490	39.828	79.318
246	CB POT RURAL	8F	311.956	256.305	568.260
247	EAST BELLEVUE	3B	106.592	58.084	164.676
250	OTOE CO RWD3	8F	95.493	35.693	131.186
251	CASS CO RWD1-1	8F	60.892	31.122	92.014
252	CASS CO RWD1-2	8F	59.941	27.200	87.141

TOTAL FOR BOOSTER STATIONS
CAPITAL COST: 1769.107
O&M: 1745.349
TOTAL: 3514.453

STORAGE FACILITIES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
300	ARLINGTON	216.066	11.527	227.593
303	HERMAN	85.342	8.490	93.832
304	KENNARD	81.862	7.943	89.805
305	WASHINGTON	64.160	3.698	67.858
306	DUNLAP	145.352	10.733	156.085
307	LITTLE SIOUX	93.179	8.776	101.955
308	LOGAN	74.502	13.032	87.534
309	MAGNOLIA	62.360	7.358	69.718
311	MODALE	134.559	7.801	142.360
312	MONDAMIN	120.052	8.708	128.759
313	PERSIA	128.399	9.075	137.474
314	PISGAH	.746	7.946	8.692
315	WOODBINE	223.032	12.200	235.232
316	AVOCA	.934	8.245	9.178
316	AVOCA-1	276.439	14.500	290.939
317	CARSON	169.475	9.842	179.317
318	CRESENT	71.876	8.460	80.336
319	HANCOCK	71.824	8.469	80.294
320	MACEDONIA	139.764	8.054	147.818
321	MCCLELAND	44.058	3.548	47.606
322	MINDEN	125.478	9.744	135.222
323	NEOLA	219.573	11.206	230.780
324	OAKLAND	2.986	11.633	14.618
324	OAKLAND-1	232.973	13.221	246.194
325	TREYNOR	228.992	12.551	241.543
326	UNDERWOOD	184.597	9.718	194.315
327	WALNUT	203.862	10.659	214.521
328	EMERSON	157.130	8.881	166.011
329	GLENWOOD	18.150	34.253	52.403
329	GLENWOOD-1	179.167	11.320	190.487
329	GLENWOOD-2	527.199	26.781	553.980
329	GLENWOOD-3	59.665	25.129	84.794
329	GLENWOOD-4	48.822	9.020	57.843
329	GLENWOOD-5	53.986	16.694	70.680
330	HASTINGS	60.958	7.633	68.591
331	HENDERSON	60.958	7.633	68.591
332	MALVERN	174.469	9.764	184.234
333	PACIFIC JUNCTION	57.871	4.140	62.011
334	SILVER CITY	56.093	7.483	63.576
335	TABOR	1.586	9.320	10.906
335	TABOR-1	150.124	8.690	158.814
336	ALVO	134.559	7.801	142.360
337	AVOCA	95.706	7.633	103.339
338	EAGLE	158.756	9.223	167.979
339	ELMWOOD	184.650	10.804	195.453
340	GREENWOOD	172.669	9.835	182.504
341	LOUISVILLE	125.991	9.615	135.606
343	MURDOCK	143.168	8.390	151.559
344	MURRAY	99.880	7.823	107.703
345	NEHAWKA	.922	8.318	9.240
347	UNION	109.619	8.245	117.864
348	WEEPING WATER	51.921	13.619	65.540
349	BLAIR B	48.450	38.639	87.090
350	MISSOURI VALLEY B	24.478	31.580	56.057
351	PLATTSMOUTH B	660.621	37.415	698.036
351	PLATTSMOUTH-1 B	111.624	31.664	143.288
352	FORT CALHOUN B	96.782	30.353	127.135
353	WASH CO RWD I	60.523	4.732	65.255
354	WASH CO RWD II	.648	4.291	4.940

354	WASH CO RWD-1 II	54.418	3.989	58.406
355	WASH CO RWD III	64.846	4.884	69.730
356	WASH CO RWD IV	77.815	5.325	83.140
357	WASH CO RWD V	54.038	4.509	58.547
358	WASH CO RWD VI	103.754	6.220	109.974
359	WASH CO RWD VII	110.238	6.444	116.682
360	WASH CO RWD VIII	29.004	11.268	40.272
361	HARR CO RWD I	114.561	6.589	121.150
361	HARR CO RWD-1 I	114.561	6.589	121.150
362	HARR CO RWD II	112.400	6.516	118.916
362	HARR CO RWD-1 II	112.400	6.516	118.916
363	HARR CO RWD III	90.784	5.772	96.557
363	HARR CO RWD-1 III	90.784	5.772	96.557
364	HARR CO RWD-2 III	90.784	5.772	96.557
364	HARR CO RWD IV	34.585	3.844	38.428
364	HARR CO RWD-1 IV	34.585	3.844	38.428
365	HARR CO RWD V	54.038	4.509	58.547
365	HARR CO RWD-1 V	54.038	4.509	58.547
365	HARR CO RWD VI	58.361	4.660	63.021
366	HARR CO RWD-2 VI	58.361	4.660	63.021
367	POTT CO RWD I	30.439	13.348	43.788
368	POTT CO RWD II	30.644	13.644	44.289
369	POTT CO RWD III	27.671	9.340	37.011
370	POTT CO RWD IV	27.056	8.445	35.501
371	POTT CO RWD V	28.953	11.196	40.149
372	POTT CO RWD VI	269.977	14.836	284.812
373	POTT CO RWD VII	28.953	11.196	40.149
374	POTT CO RWD VIII	26.697	7.925	34.622
375	MILL CO RWD I	25.057	5.549	30.606
375	MILL CO RWD-1 I	26.697	7.925	34.622
376	MILL CO RWD II	26.441	7.556	33.997
376	MILL CO RWD-1 II	25.262	5.845	31.107
376	MILL CO RWD-2 II	68.229	4.588	72.817
377	MILL CO RWD III	105.915	6.292	112.208
377	MILL CO RWD-1 III	105.915	6.292	112.208
377	MILL CO RWD-2 III	73.408	4.811	78.220
378	CASS CO RWD I	-.553	9.814	9.262
378	CASS CO RWD-1 I	-.819	12.899	12.080
379	CASS CO RWD II	106.140	8.095	114.235
380	CASS CO RWD III	56.200	4.588	60.788
380	CASS CO RWD-1 III	56.200	4.588	60.788
380	CASS CO RWD-2 III	58.361	4.660	63.021
381	OTOE CO RWD III	179.167	11.320	190.487
397	DEER CREEK	369.072	17.447	386.519
398	FLORENCE PREC	151.391	8.148	159.540
399	EAST BELLEVUE	396.539	18.195	414.734

TOTAL FOR STORAGE FACILITIES

CAPITAL COST:	11102.954
O&M:	1074.591
TOTAL:	12177.553

PIPELINES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
629	WASH CO RWD ALL	87.533	15.744	103.277
630	WASH CO RWD ALL	3176.940	571.516	3748.457
632	WASH CO RWD 7F	460.756	82.886	543.643
633	WASH CO RWD 7B	1829.087	332.230	2161.317
635	HARR CO RWD ALL	1184.789	213.136	1397.925
644	HARR CO RWD 3F	907.112	163.186	1070.298
645	HARR CO RWD 3F	3657.571	657.983	4315.555
648	HARR CO RWD 3B	1269.493	232.423	1501.916
649	HARR CO RWD 3B	1782.963	326.424	2109.387
653	POTT CO RWD 8F	2874.495	517.110	3391.605
654	POTT CO RWD 8F	9276.169	1668.746	10944.915
662	MILLS CO RWD 3F	3095.984	566.806	3662.790
663	MILLS CO RWD 3F	2934.246	537.200	3471.447
664	MILLS CO RWD 3F	392.029	70.525	462.555
665	MILLS CO RWD 3F	5474.202	984.783	6458.986
666	CASS CO RWD1 5F	-18.718	183.183	164.466
669	CASS CO RWD1 3B	1134.795	204.145	1338.940
672	CASS CO RWD3 3F	440.400	79.227	519.627
673	CASS CO RWD3 3F	1892.714	340.490	2233.204
674	OTOE CO RWD III 5F	1186.611	209.884	1396.495
676	CASS CO RWD 4 5F	254.015	45.698	299.714
677	CASS CO RWD4 8F	30.748	5.529	36.277
678	CASS CO RWD 8F	167.367	30.106	197.473
679	CASS CO RWD2 5F	862.874	156.733	1019.608
680	DEER CREEK 7B	354.313	63.740	418.052
681	FLORENCE PREC 7B	70.125	12.618	82.743
685	EAST BELLEVUE 3B	32.959	5.930	38.890
728	TO NEHAWKA 8F	35.949	6.470	42.419
729	TO UNION 8F	27.230	4.897	32.126
730	TO WPNG WATER 8F	85.823	15.637	101.460
731	OTOE CO RWD3 8F	224.883	40.982	265.865
732	OTOE CO RWD3 8F	3472.257	632.814	4105.071
734	BLAIR RIVER XING 3B	103.524	18.952	122.477
735	BELLEVUE R XING 3F	129.553	23.714	153.267
550	ARLINGTON	108.850	70.693	179.543
553	KENNARD	1.207	20.157	21.364
554	WASHINGTON	22.716	7.817	30.533
555	HERMAN	0.000	18.778	18.778
556	DUNLAP	47.585	84.455	132.040
557	LITTLE SIOUX	10.625	15.897	26.523
558	LOGAN	63.951	100.876	164.827
559	MAGNOLIA	0.000	12.154	12.154
561	MODALE	0.000	16.866	16.866
562	MODAMIN	0.000	23.867	23.867
563	PERSIA	0.000	18.429	18.429
564	PISGAH	6.278	18.062	24.341
565	WOODBINE	90.337	94.143	184.479
566	AVOCA	0.000	88.494	88.494
567	CARSON	35.225	50.527	85.752
568	CRESENT	36.080	22.248	58.328
569	HANCOCK	10.519	15.215	25.734
570	MACEDONIA	26.674	23.715	50.390
571	MCCLELLAND	1.192	8.913	10.105
572	MINDEN	22.781	29.321	52.102
573	NEOLA	63.372	67.241	130.613
574	OAKLAND	61.446	104.919	166.365
575	TREYNOR	233.840	62.701	296.541
576	UNDERWOOD	103.465	40.675	144.140
577	WALNUT	49.120	59.285	108.404

578	EMERSON	23.467	32.448	55.915
580	HASTINGS	0.000	9.914	9.914
581	HENDERSON	0.000	11.780	11.780
582	MALVERN	0.000	63.944	63.944
583	PACIFIC JUNCTION	0.000	27.951	27.951
584	SILVER CITY	0.000	14.286	14.286
585	TABOR	30.708	61.782	92.490
586	ALVO	0.000	8.438	8.438
587	AVOCA	10.481	15.272	25.753
588	EAGLE	89.105	39.542	128.647
589	ELMWOOD	55.934	41.039	96.973
590	GREENWOOD	96.046	44.449	140.495
591	LOUISVILLE	0.000	56.380	56.380
592	MANLEY	30.408	13.464	43.872
593	MURDOCK	13.085	17.637	30.721
594	MURRAY	9.901	18.604	28.505
595	NEHAWKA	24.047	21.388	45.435
597	UNION	0.000	15.248	15.248
598	WEEPING WATER	58.495	77.119	135.614
599	WATERLOO	31.872	31.728	63.600
609	FT CALHOUN B	958.453	175.180	1133.632
608	BLAIR B	3183.001	780.778	3963.779
610	MISSOURI VALLEY B	1095.512	350.732	1446.244
611	GLENWOOD B	943.043	361.692	1304.735
612	PLATTSMOUTH B	2303.770	667.166	2970.935
618	FLORENCE PREC B	338.069	50.701	388.770
619	DEER CREEK B	897.938	133.163	1031.101
620	EAST BELLEVUE B	1183.241	177.453	1360.694

TOTAL FOR PIPELINES

CAPITAL COST:	61262.630
O&M:	13416.173
TOTAL:	74678.810

GRAND TOTAL

CAPITAL COST:	85197.204
O&M:	21268.215
TOTAL:	106465.431

Scheme IIIB

TREATMENT PLANTS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
005	BLAIR	3E	7917.907	3764.616	11682.523

TOTAL FOR TREATMENT PLANTS

CAPITAL COST:	7917.907
O&M:	3764.616
TOTAL:	11682.523

BOOSTER STATIONS

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
100	WASH CO RWD 4	7E	13.888	6.398	20.285
101	FT CALHOUN	7E	29.297	19.737	49.033
103	WASHINGTON	5F	13.522	4.983	18.505
104	SW WASH CO	5F	27.413	24.593	52.006
105	S WASH CO	5F	32.557	37.861	70.417
106	WASH CO RWD 8	5F	26.889	28.401	55.290
107	WASH CO RWD 7	5F	20.064	13.912	33.976
110	PERSIA	5F	14.915	7.359	22.273
113	HARRISON RWD 1	5F	22.176	17.936	40.111
117	WOODBINE	3F	28.920	28.191	57.111
118	LOGAN	3F	27.413	27.251	54.664
119	MO VALLEY	3E	116.572	155.270	271.842
129	CARSON	8F	24.664	23.477	48.141
130	OAKLAND	8F	24.071	21.457	45.528
131	AVOCA	8F	28.920	32.327	61.247
132	MCCLELLAND	8F	52.772	110.919	163.692
133	NEOLA	8F	56.493	101.869	158.362
134	WESTON	8F	22.176	19.838	42.014
135	HONEY CREEK	8F	20.064	13.921	33.984
143	EMERSON	8F	21.499	15.763	37.262
144	HENDERSON	8F	14.006	5.914	19.921
145	NW MILLS CO	8F	18.490	12.190	30.680
146	SW MILLS CO	8F	18.490	12.190	30.680
151	SILVER CITY	3F	19.453	13.363	32.816
152	NORTH MILLS CO	3F	26.354	25.763	52.117
153	GLENWOOD EAST	3F	39.301	45.150	84.451
154	GLENWOOD	3E	166.710	274.766	441.476
156	CASS CO RWD1-1	5F	11.180	20.347	31.528
157	CASS CO RWD1-2	5F	10.602	16.458	27.061
158	OTOE CO RWD3	5F	28.068	11.804	39.872
159	CASS CO RWD 3-1	5F	16.917	7.228	24.145
161	CASS CO RWD3-3	5F	28.643	19.133	47.776
163	CASS CO RWD3-2	8F	27.221	17.519	44.740
164	CASS CO RWD 3-4	8F	39.490	39.828	79.318
246	CB POT RURAL	8F	311.956	256.305	568.260
250	OTOE CO RWD3	8F	95.493	35.693	131.186
251	CASS CO RWD1-1	8F	60.892	31.122	92.014
252	CASS CO RWD1-2	8F	59.941	27.200	87.141

TOTAL FOR BOOSTER STATIONS

CAPITAL COST:	1617.492
O&M:	1583.436
TOTAL:	3200.925

STORAGE FACILITIES

ID	TITLE	PRESENT WORTH CAPITAL COST	O&M	TOTAL
300	ARLINGTON	216.066	11.527	227.593
301	BLAIR	32.827	37.527	70.354
302	FORT CALHOUN	89.342	19.113	108.455
303	HERMAN	85.342	8.490	93.832
304	KENNARD	81.862	7.943	89.805
305	WASHINGTON	64.160	3.698	67.858
306	DUNLAP	145.352	10.733	156.085
307	LITTLE SIOUX	93.179	8.776	101.955
308	LOGAN	74.502	13.032	87.534
309	MAGNOLIA	62.360	7.358	69.718
310	MISSOURI VALLEY	8.244	21.950	30.194
311	MODALE	134.559	7.801	142.360
312	MONDAMIN	120.052	8.708	128.759
313	PERSIA	128.399	9.075	137.474
314	PISGAH	.746	7.946	8.692
315	WOODBINE	223.032	12.200	235.232
316	AVOCA	.934	8.245	9.178
316	AVOCA-1	276.439	14.500	290.939
317	CARSON	169.475	9.842	179.317
318	CRESENT	71.876	8.460	80.336
319	HANCOCK	71.824	8.469	80.294
320	MACEDONIA	139.764	8.054	147.818
321	MCCLELAND	44.058	3.548	47.606
322	MINDEN	125.478	9.744	135.222
323	NEOLA	219.573	11.206	230.780
324	OAKLAND	2.986	11.633	14.618
324	OAKLAND-1	232.973	13.221	246.194
325	TREYNOR	228.992	12.551	241.543
326	UNDERWOOD	184.597	9.718	194.315
327	WALNUT	203.862	10.659	214.521
328	EMERSON	157.130	8.881	166.011
329	GLENWOOD	18.150	34.253	52.403
329	GLENWOOD-1	179.167	11.320	190.487
329	GLENWOOD-2	527.199	26.781	553.980
329	GLENWOOD-3	59.665	25.129	84.794
329	GLENWOOD-4	48.822	9.020	57.843
329	GLENWOOD-5	53.986	16.694	70.680
330	HASTINGS	60.958	7.633	68.591
331	HENDERSON	60.958	7.633	68.591
332	MALVERN	174.469	9.764	184.234
333	PACIFIC JUNCTION	57.871	4.140	62.011
334	SILVER CITY	56.093	7.483	63.576
335	TABOR	1.586	9.320	10.906
335	TABOR-1	150.124	8.690	158.814
336	ALVO	134.559	7.801	142.360
337	AVOCA	95.706	7.633	103.339
338	EAGLE	158.756	9.223	167.979
339	ELMWOOD	184.650	10.804	195.453
340	GREENWOOD	172.669	9.835	182.504
341	LOUISVILLE	125.991	9.615	135.606
343	MURDOCK	143.168	8.390	151.559
344	MURRAY	99.880	7.823	107.703
345	NEHAWKA	.922	8.318	9.240
346	PLATTSMOUTH	660.621	37.415	698.036
346	PLATTSMOUTH-1	111.786	31.671	143.457
347	UNION	109.619	8.245	117.864
348	WEEPING WATER	51.921	13.619	65.540
353	WASH CO RWD I	60.523	4.732	65.255
354	WASH CO RWD II	.648	4.291	4.940

354	WASH CO RWD-1 II	54.418	3.989	58.406
355	WASH CO RWD III	64.846	4.884	69.730
356	WASH CO RWD IV	77.815	5.325	83.140
357	WASH CO RWD V	54.038	4.509	58.547
358	WASH CO RWD VI	103.754	6.220	109.974
359	WASH CO RWD VII	110.238	6.444	116.682
360	WASH CO RWD VIII	29.004	11.268	40.272
361	HARR CO RWD I	114.561	6.589	121.150
361	HARR CO RWD-1 I	114.561	6.589	121.150
362	HARR CO RWD II	112.400	6.516	118.916
362	HARR CO RWD-1 II	112.400	6.516	118.916
363	HARR CO RWD III	90.784	5.772	96.557
363	HARR CO RWD-1 III	90.784	5.772	96.557
364	HARR CO RWD-2 III	90.784	5.772	96.557
364	HARR CO RWD IV	34.585	3.844	38.428
364	HARR CO RWD-1 IV	34.585	3.844	38.428
365	HARR CO RWD V	54.038	4.509	58.547
365	HARR CO RWD-1 V	54.038	4.509	58.547
366	HARR CO RWD VI	58.361	4.660	63.021
366	HARR CO RWD-2 VI	58.361	4.660	63.021
367	POTT CO RWD I	30.439	13.348	43.788
368	POTT CO RWD II	30.644	13.644	44.289
369	POTT CO RWD III	27.671	9.340	37.011
370	POTT CO RWD IV	27.056	8.445	35.501
371	POTT CO RWD V	28.953	11.196	40.149
372	POTT CO RWD VI	269.977	14.836	284.812
373	POTT CO RWD VII	28.953	11.196	40.149
374	POTT CO RWD VIII	26.697	7.925	34.622
375	MILL CO RWD I	25.057	5.549	30.606
375	MILL CO RWD-1 I	26.697	7.925	34.622
376	MILL CO RWD II	26.441	7.556	33.997
376	MILL CO RWD-1 II	25.262	5.845	31.107
376	MILL CO RWD-2 II	68.229	4.588	72.817
377	MILL CO RWD III	105.915	6.292	112.208
377	MILL CO RWD-1 III	105.915	6.292	112.208
377	MILL CO RWD-2 III	73.408	4.811	78.220
378	CASS CO RWD I	-.553	9.814	9.262
378	CASS CO RWD-1 I	-.819	12.899	12.080
379	CASS CO RWD II	106.140	8.095	114.235
380	CASS CO RWD III	56.200	4.588	60.788
380	CASS CO RWD-1 III	56.200	4.588	60.788
380	CASS CO RWD-2 III	58.361	4.660	63.021
381	OTOE CO RWD III	179.167	11.320	190.487

TOTAL FOR STORAGE FACILITIES

CAPITAL COST:	10146.817
O&M:	1008.826
TOTAL:	11155.650

PIPELINES

ID	TITLE		PRESENT WORTH CAPITAL COST	O&M	TOTAL
629	WASH CO RWD ALL		87.533	15.744	103.277
630	WASH CO RWD ALL		3176.940	571.516	3748.457
631	WASH CO RWD 7E		1216.398	220.942	1437.340
632	WASH CO RWD 7F		460.756	82.886	543.643
635	HARR CO RWD ALL		1184.789	213.136	1397.925
644	HARR CO RWD 3F		907.112	163.186	1070.298
645	HARR CO RWD 3F		3657.571	657.983	4315.555
646	HARR CO RWD 3E		958.726	175.525	1134.251
647	HARR CO RWD 3E		1472.197	269.525	1741.722
653	POTT CO RWD 8F		2874.495	517.110	3391.605
654	POTT CO RWD 8F		9276.169	1668.746	10944.915
662	MILLS CO RWD 3F		3095.984	566.806	3662.790
663	MILLS CO RWD 3F		2934.246	537.200	3471.447
664	MILLS CO RWD 3F		392.029	70.525	462.555
665	MILLS CO RWD 3F		5474.202	984.783	6458.986
666	CASS CO RWD1 5F		-18.718	183.183	164.466
668	CASS CO RWD1 3E		950.875	171.058	1121.934
672	CASS CO RWD3 3F		440.400	79.227	519.627
673	CASS CO RWD3 3F		1892.714	340.490	2233.204
674	OTOE CO RWD III 5F		1186.611	209.884	1396.495
676	CASS CO RWD 4 5F		254.015	45.698	299.714
677	CASS CO RWD4 8F		30.748	5.529	36.277
678	CASS CO RWD 8F		167.367	30.106	197.473
679	CASS CO RWD2 5F		862.874	156.733	1019.608
728	TO NEHAWKA	8F	35.949	6.470	42.419
729	TO UNION	8F	27.230	4.897	32.126
730	TO WPNG WATER	8F	85.823	15.637	101.460
731	OTOE CO RWD3	8F	224.883	40.982	265.865
732	OTOE CO RWD3	3F	3472.257	632.814	4105.071
733	BLAIR RIVER XING	3E	80.119	14.667	94.786
735	BELLEVUE R XING	3F	129.553	23.714	153.267
550	ARLINGTON		108.850	70.693	179.543
551	BLAIR		821.238	487.566	1308.804
552	FT. CALHOUN		185.071	65.803	250.873
553	KENNARD		1.207	20.157	21.364
554	WASHINGTON		22.716	7.817	30.533
555	HERMAN		0.000	13.778	13.778
556	DUNLAP		47.585	84.455	132.040
557	LITTLE SIOUX		10.625	15.897	26.523
558	LOGAN		63.951	100.876	164.827
559	MAGNOLIA		0.000	12.154	12.154
560	MISSOURI VALLEY		114.738	227.426	342.165
561	MODALE		0.000	16.866	16.866
562	MODAMIN		0.000	23.867	23.867
563	PERSIA		0.000	18.429	18.429
564	PISGAH		6.278	18.062	24.341
565	WOODBINE		90.337	94.143	184.479
566	AVOCA		0.000	88.494	88.494
567	CARSON		35.225	50.527	85.752
568	CRESENT		36.080	22.248	58.328
569	HANCOCK		10.519	15.215	25.734
570	MACEDONIA		26.674	23.715	50.390
571	MCCLELLAND		1.192	8.913	10.105
572	MINDEN		22.781	29.321	52.102
573	NEOLA		63.372	67.241	130.613
574	OAKLAND		61.446	104.919	166.365
575	TREYNOR		233.840	62.701	296.541
576	UNDERWOOD		103.465	40.675	144.140
577	WALNUT		49.120	59.285	108.404

578	EMERSON	23.467	32.448	55.915
579	GLENWOOD	653.324	360.395	1013.719
580	HASTINGS	0.000	9.914	9.914
581	HENDERSON	0.000	11.780	11.780
582	MALVERN	0.000	63.944	63.944
583	PACIFIC JUNCTION	0.000	27.951	27.951
584	SILVER CITY	0.000	14.286	14.286
585	TABOR	30.708	61.782	92.490
586	ALVO	0.000	8.438	8.438
587	AVOCA	10.481	15.272	25.753
588	EAGLE	89.105	39.542	128.647
589	ELMWOOD	55.934	41.039	96.973
590	GREENWOOD	96.046	44.449	140.495
591	LOUISVILLE	0.000	56.380	56.380
592	MANLEY	30.408	13.464	43.872
593	MURDOCK	13.085	17.637	30.721
594	MURRAY	9.901	18.604	28.505
595	NEHAWKA	24.047	21.388	45.435
596	PLATTSMOUTH	330.290	430.556	760.846
597	UNION	0.000	15.248	15.248
598	WEEPING WATER	58.495	77.119	135.614
599	WATERLOO	31.872	31.728	63.600

TOTAL FOR PIPELINES

CAPITAL COST:	50565.320
O&M:	11946.309
TOTAL:	62511.638

GRAND TOTAL

CAPITAL COST:	70247.536
O&M:	18303.187
TOTAL:	88550.736